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RILEY RIDGE
NATURAL GAS PROJECT
SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT
EXXON LABARGE PROJECT

Phase II Revised June 1985

DEPARTMENT OF INTERIOR
BUREAU OF LAND MANAGEMENT
DEPARTMENT OF AGRICULTURE
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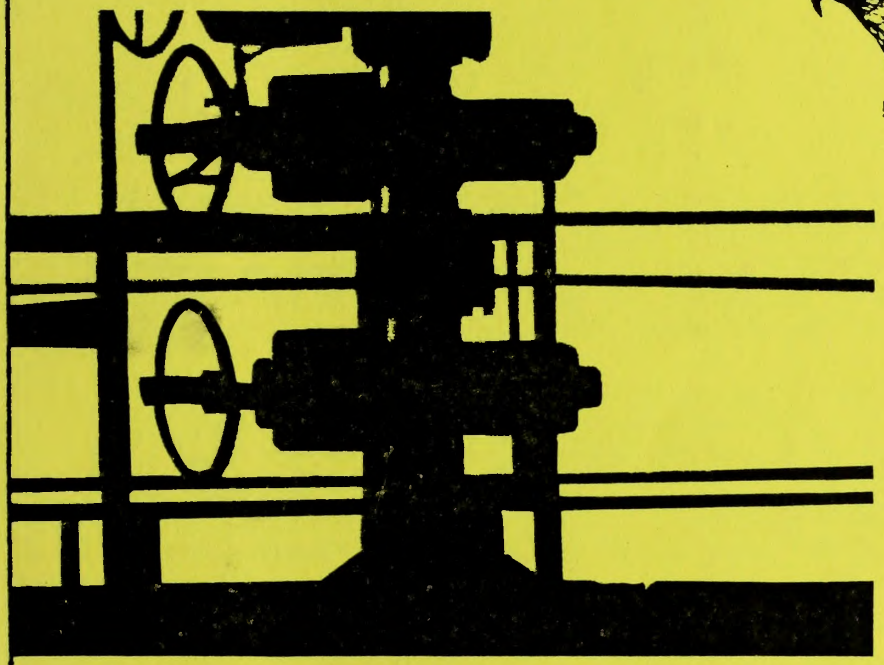

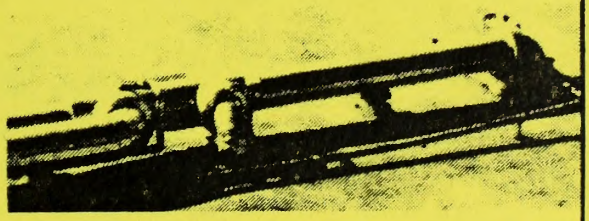

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BUREAU OF LAND MANAGEMENT
ROCK SPRINGS DISTRICT OFFICE
P.O. Box 1869
Rock Springs, Wyoming 82902-1869
(307) 382-5350

JUN 27 1985

Dear Reader:

In January 1985, Exxon applied to the Bureau of Land Management for a right-of-way to construct three gas processing modules of their LaBarge Project in Sweetwater County, Wyoming. In April 1985, they applied for a right-of-way for a second feed gas trunkline to serve these gas processing modules. Exxon has called this "Phase II" of the LaBarge Project.

Exxon's proposal modifies the location of the gas processing modules from that addressed in the Riley Ridge Natural Gas Project Environmental Impact Statement (EIS). Exxon's proposal for the feed gas trunkline is to parallel the trunkline recently authorized by BLM. Therefore, additional analysis of these changes was needed. This revised Environmental Assessment (EA) and Decision Record on Phase II of the LaBarge Project is provided for your information.

Sincerely yours,

Gene C. Haren

District Manager

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EA No. WY-049-EA85-37

EXXON LABARGE PROJECT
PHASE II
SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT (EA)
DECISION RECORD

PROPOSED ACTION

Exxon, as part of its LaBarge Project, proposes to construct three sour gas processing modules (240 million standard cubic feet per day capacity) and appurtenant facilities in Sweetwater County, Wyoming (Sections 18 and 19, T. 22N., R. 111 W). They also propose to place various pipelines in a corridor between their Phase I and proposed Phase II sites. In addition, to supply feed gas to these Phase II modules, Exxon proposes a second feed gas trunkline from the dehydration unit in the well field to the plant site. The second trunkline would be located a nominal 50 feet west of the first trunkline.

Exxon also proposes to construct a helium recovery unit in the northwest corner of Section 14, T. 22 N., R 112 W.

The capacity of the gas processing facilities proposed by Exxon is within the scope of the Riley Ridge Natural Gas Project EIS and Record of Decision (ROD). Through the EIS, it was determined that Exxon's overall LaBarge Project conforms with applicable BLM and FS land use plans.

ALTERNATIVES CONSIDERED

Three alternatives to the proposed action have been considered. The three alternatives were as follows:

No Action (Alternative 1)

The No Action alternative was to approve the facilities described in the Riley Ridge ROD. This included the construction of six gas processing modules at the Shute Creek (Phase I) site at a gas processing capacity of 1200 million standard cubic feet per day. This alternative was dismissed because it was expected to result in a violation of air quality standards.

No Additional Authorizations (Alternative 2)

This alternative would grant Exxon no additional authorizations. Their gas processing capacity would remain at the 600 MSCFD authorized for Phase I. A right-of-way for the second feed gas trunkline would not be granted. This alternative was dismissed because the anticipated impacts from the proposed action are expected to be within the range of impacts approved in the Riley Ridge ROD and because this alternative would not meet the purpose of and need for the proposed action (i.e., development of the natural gas resources of the area and meeting the nation's energy needs).

Reduced Capacity (Alternative 3)

This alternative would grant Exxon authorization for two gas processing units (480 MSCFD) at their Phase I site and two units (480 MSCFD) at their Phase II site. A second feed gas trunkline would not be needed. This alternative was developed primarily because a high degree of controversy was expected over the second trunkline. This high degree of controversy did not materialize. Other impacts are also expected to be acceptable. This alternative would also not fully meet the purpose of and need for the proposal. Therefore, this alternative was dismissed.

DECISION AND RATIONALE

Decision: It is the decision of the Rock Springs District Manager of the Bureau of Land Management, in consultation with the Bridger-Teton Forest Supervisor of the U.S. Forest Service, to approve the rights-of-way for Phase II, of Exxon's LaBarge Project and a right-of-way for construction of a helium recovery unit at Exxon's Phase I site. Approval is contingent upon implementation of the mitigation described in the Supplemental EA for Phase II and the Riley Ridge Natural Gas Project ROD.

Supporting Rationale: Based on analysis of the impacts to affected resource values, the impacts from implementation of the Proposed Action under Phase II are expected to be within the scope of impacts addressed in the Riley Ridge Natural Gas Project EIS. Implementation of the BLM and FS required mitigation measures stipulated in the Riley Ridge Natural Gas Project ROD would effectively mitigate impacts so that all impacts would be acceptable. None of the alternatives considered would provide an overall advantage over the proposed action given the nation's need for energy resources.

Mitigation: All the appropriate required Federal mitigation measures contained in the Riley Ridge ROD will be required.

Monitoring: All appropriate required monitoring described in Section VI of the Riley Ridge ROD will be required.

CONCLUSION

Based on the analysis of the Revised Supplemental EA for Phase II, I find that this action is not expected to have a significantly different impact on the human environment than was analyzed in the Riley Ridge Natural Gas Project EIS and, therefore, conclude that no EIS is necessary. The proposed action is in conformance with applicable BLM land use plans.

Approval:

Gene C. Herrin — June 27, 1985

District Manager, Rock Springs District — Date

Bureau of Land Management

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Suppl.

DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT

DEPARTMENT OF AGRICULTURE

FOREST SERVICE

REVISED

SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT WY-049-EA85-37

RILEY RIDGE NATURAL GAS PROJECT EIS

EXXON LABARGE PROJECT
PHASE II

Lincoln, Sublette, and Sweetwater Counties Wyoming

June 1985

Prepared By:

BUREAU OF LAND MANAGEMENT

ROCK SPRINGS DISTRICT

In Cooperation with

BRIDGER-TETON NATIONAL FOREST

TABLE OF CONTENTS

	Page
Cover Sheet	
Table of Contents	i
List of Tables	iii
List of Figures	iv
Chapter I	
Proposed Action and Alternatives	1
Background	1
History	1
Present	6
Purpose and Need	8
Description of Proposed Action and Alternatives	12
Previously Authorized Actions	12
Proposed Action	12
Gas Processing Modules	14
Sanitary Sewage	14
Evaporation Ponds	14
Retention Pond	14
Utility Corridor	14
Helium Storage and Transportation	16
Miscellaneous Facilities	16
Feed Gas Trunkline	16
Sales Gas (Methane) Pipeline	16
Temporary Facilities	17
Helium Recovery Unit	17
No Action (Alternative 1)	17
No Additional Rights-of-Way Authorized (Alternative 2)	17
Reduced Capacity (Alternative 3)	17
Chapter II	
Affected Environment/Environmental Consequences	20
Proposed Action	20
Air Quality	20
Soils	27
Water Resources	27
Land Use	28
Vegetation	28
Wildlife	29
Recreation	29
Visual Resources	30
Cultural Resources	30
Social and Economic Conditions	30
Health and Safety	33
No Action (Alternative 1)	40
No Additional Rights-of-Way Authorized (Alternative 2)	40
Reduced Capacity (Alternative 3)	41
Unavoidable Adverse Impacts	41
Irreversible and Irretrievable Commitments of Resources	42
Short-Term Use Versus Long-Term Productivity	42
Cumulative Impacts	42

Chapter III

Mitigation 44
Monitoring 44

Chapter IV

Consultation and Coordination 46

References 47

Appendix

Appendix 1 - Letter to Exxon from BLM District Manager Authorizing Venting of CO_2

LIST OF TABLES

Table I-1	Exxon LaBarge Project Comparison Table	3
Table II-1	Summary of Fugitive Dust Emissions - Phase II	19
Table II-2	Modeled Pollutant Concentrations	21
Table II-3	Modeled Sulfur Dioxide Concentrations	22
Table II-4	Calculated Acidic Deposition Rates in the Bridger Wilderness Area	23
Table II-5	Screening Concentrations for Impacts to Soils and Vegetation	24
Table II-6	School District Projections	29
Table II-7	Estimated Workforce 1985-1992	30
Table II-8	Population Baseline, Lincoln County	31
Table II-9	Population Baseline, Sweetwater County	32
Table II-10	Population Baseline, Sublette County	33
Table II-11	Projected Revenues for Lincoln and Sweetwater Counties	34
Table II-12	Annual Risk to Receptors to a Significant Dose of H_2S	36
Table II-13	Annual Risk of Exposure to a Lethal Dose of H_2S	37

LIST OF FIGURES

Figure 1	Map of Project Location	2
Figure 1-2	Shute Creek Gas Processing Plant Site	7
Figure 1-3	Maximum 24-Hour SO_2 Concentrations - Phase I only	9
Figure 1-4	Annual Average SO_2 Concentrations-Phases I and II	10
Figure 1-5	Phase II-Site Plan	12
Figure 1-6	Phase II-Typical Section, Pipeline Corridor	14

CHAPTER I

CHAPTER I

PROPOSED ACTION AND ALTERNATIVES

BACKGROUND

HISTORY

In 1981, the Riley Ridge Natural Gas Project was proposed as individual projects by:

1) Northwest Pipeline Corporation and Mobil Oil Corporation
2) Exxon Company, U.S.A.
3) American Quasar Petroleum Company and Williams Exploration Company

This natural gas development project included the proposal to construct, operate, and abandon a deep gas well field in western Wyoming; gathering lines for the transportation of sour gas within the well field to dehydration facilities; dehydration facilities; trunklines for the shipment of sour gas from the well field dehydration facilities to the treatment plants; three treatment plants; sales gas pipelines; power transmission lines for supplying power to the well field and treatment plants; and facilities for handling and transporting by-products (sulfur and carbon dioxide) to markets.

In 1982 (between March and July), the applicants applied to the Bureau of Land Management (BLM) for right-of-way permits to cross federal land managed by the BLM and Forest Service (FS). The impacts of the project actions and components were analyzed in the Riley Ridge Natural Gas Project Environmental Impact Statement (EIS) prepared jointly by BLM and FS (BLM and FS, 1983). In addition to the proposed project, the Riley Ridge EIS evaluated component and treatment plant siting alternatives and a no action alternative.

The Riley Ridge EIS, prepared in accordance with the National Environmental Policy Act (NEPA) and the Council on Environmental Quality (CEQ) regulations, is the environmental documentation of Exxon's overall LaBarge Project proposal. It was determined through the Riley Ridge EIS and accompanying Riley Ridge Natural Gas Project Record of Decision (ROD), which was completed in January 1984, that the overall project proposal is in conformance with applicable BLM and FS land use plans. The ROD approved well field development, treatment plant locations, general trunkline locations, power transmission line locations, treatment plant access roads, gas venting conditions, and other associated development and implementation requirements for construction, operation, and abandonment. Figure 1 provides a general location map.

Immediately following the ROD, only Exxon proceeded with the implementation of their project plans. However, since they had not obtained markets for all of the sales gas and carbon dioxide, the principle products for sale, Exxon split their development schedule into two phases. Table I-1 provides a comparison of what was addressed in the EIS for all applicants, Exxon only, Exxon Phase I, Exxon Phase II, and Exxon Phase I and II combined.

In the spring of 1984, Exxon proceeded with plans to acquire power for their Shute Creek treatment plant. It was presumed that it would be provided by Utah Power and Light (UP&L). However, Exxon found they could obtain the same power from Pacific Power and Light (PP&L) at a significant savings. The Regional Boundary dividing the jurisdiction of the two power companies was the Lincoln-Sweetwater county line (1.75 miles east of the Shute Creek Plant). To take advantage of this savings Exxon applied to the BLM for a right-of-way to locate its compressor station in Sweetwater County (PP&L jurisdiction) since approximately one-third of its power need was for the compressor facility. BLM completed an EA and Decision Record in August 1984 (EA No. WY-042-EA84-82) and a right-of-way grant was issued in September 1984. In the meantime, PP&L appealed to the Wyoming Public Service Commission (PSC) for permission to supply of the power for the Exxon plant and the PSC decided in favor of PP&L.

A brief chronology of key permitting that has occurred to date is as follows:

On April 24, 1984, the State of Wyoming Industrial Siting Council issued a permit to Exxon to construct and operate a gas processing plant in Lincoln County at the Shute Creek site (three 200 MSCFD modules) for a total processing capacity of 600 million standard cubic feet per day (MSCFD).

On May 1, 1984, the Bureau of Land Management granted to Exxon a right-of-way to construct, operate, and maintain a 600 MSCFD sour gas processing facility in Lincoln County at the Shute Creek Site within 308 fenced acres.

On May 22, 1984, the State of Wyoming Department of Environmental Quality-Air Quality Division issued an Air Quality Permit to Exxon to construct a 600 MSCFD sour gas processing plant.

On June 18, 1984, the Bureau of Land Management granted to Exxon a 200-foot right-of-way to construct, operate, and maintain a railroad spur in Lincoln County to the Shute Creek Plant site. Its length is approximately 13.5 miles with a parallel access/maintenance road.

On July 27, 1984, the Bureau of Land Management granted to Exxon a 100-foot right-of-way to construct, operate, and maintain a 9.4 mile access road in Lincoln County to the Shute Creek Plant site.

On September 11, 1984, the Bureau of Land Management granted to Exxon a right-of-way to construct, operate, and maintain a compressor facility in Sweetwater County on 40 acres and a 1.5 mile 400-foot-wide utility corridor between the Shute Creek Processing Plant and the compressor facility. This corridor was later expanded to be 500 feet wide.

On February 11, 1985, the Bureau of Land Management granted to Exxon a right-of-way to construct, operate, and maintain a feed gas trunkline which will transport a maximum of 960 MSCFD of sour gas. This grant did not include the right to proceed with any construction. Such authorization shall be given solely by means of a written Notice to Proceed.

LAKE RIDGE

STUGARTY CREEK

GRAPHITE

DEHYD. SITE

BRIDGER NATIONAL FOREST

FOREST BOUNDARY

MARBLETON

BIG PINEY

LA BARGE

FEED GAS PIPELINE

ACCESS ROAD

SHUTE CREEK PLANT SITE

RAILROAD

METHANE SALES PIPELINE

ELECTRICAL TRANSMISSION LINE

SCALE IN MILES

0 5

REVISED 4/29/85

FIGURE 1

EXXON COMPANY U.S.A.
(A DIVISION OF EXXON CORPORATION)
PRODUCTION DEPARTMENT
LA BARGE PROJECT
VICINITY MAP

TABLE I-1 - EXXON LABARGE PROJECT COMPARISON TABLE

	Riley Ridge EIS All Applicants	Riley Ridge [1] EIS-Exxon	Exxon Phase I	Exxon Phase II	Exxon Phase I & II
Gas Processing Capacity (MSCFD) [2]	2,800	1,200	600	720	1,320
Feed Gas Trunkline					
Number [3]	3	1	1	1	2
Capacity (MSCFD)	2,800	960	960	960	1,920
Reserve Capacity (MSCFD)			360	240	600
Miles of Trunkline	103 [3]	41	39	40	79
Acres Disturbed	1,065 [4]	497	485	485	970
Acres Reclaimed	958 [5]	487	475	475	950
Well Field					
Total Proposed Wells	238 [6]	75	39	25	64
Acres Disturbed	3,968 [5]	2,217 [4]	1,845	700	2,545
Acres Reclaimed	2,767 [5]	1,272 [7]	995	375	1,370
Acres Occupied for Life of Project	1,201 [5]	552 [7]	850	325	1,175
Treatment Plants	3 [8]	1	1 [9]	1 [10]	2
Acres Occupied for Life of Project	2,560 [4]	640 [5]	385	240	625
Access Roads (miles)	42 [4]	27.5 [5]	24.0	1.75	25.75
Access Roads (acres)	222 [4]	167 [5]	150	11	161
Power Transmission (miles)	104 [4]	38 [5]	15	0	1.5
Power Transmission (acres)	1,261 [4]	456 [5]	90	0	90
Methane Pipeline (miles)	133 [4]	57 [5]	17	0	17
Methane Pipeline (acres)	1,151 [4]	691 [5]	100	0	100
Carbon Dioxide Pipeline (miles)	158 [4]	57 [5]	50	0	50
Carbon Dioxide Pipeline (acres)	1,394 [4]	691 [5]	300	0	300
Maximum Annual Risk to Individual Receptor for exposure to significant Dose of H_2S (chances per 100,000) [11]	1.8	1.4	0.6	0.6	1.0
Emissions (tons/year)					
Sulfur dioxide	15,833	5,361.2	2,419.4	2,676.2	5,095.6
Hydrogen sulfide	373	75.6	188.5	193.8	382.3
Particulate matter	273	12.0	21.2	6.6	27.8
Nitrogen dioxide		157.2	272.6	374.5	647.1
Carbon monoxide	6,867	29.0	50.2	30.7	80.9

TABLE I-1 - EXXON LABARGE PROJECT COMPARISON TABLE (continued)

	Riley Ridge EIS All Applicants	Riley Ridge 1/ EIS-Exxon	Exxon Phase I	Exxon Phase II	Exxon Phase I & II
Investment (millions of dollars)					
Sublette County			406.5	409.5	816.0
Lincoln County			621.6	13.8	635.4
Sweetwater County			39.6	712.9	752.5
Workforce 12/					
Construction	4,241	3,056	2,891	526	3,417
Operations		774	256	252	508

1/ Shute Creek Alternative
2/ Million Standard Cubic Feet Per Day
3/ Number of Miles of Trunkline. Northwest - 42; Exxon - 41; Quasar - 20
4/ Table 1-15 Riley Ridge DEIS
5/ Table 1-16 Riley Ridge DEIS
6/ Table 1-5 Riley Ridge DEIS
7/ Based on Exxon disturbance representing 46% of total.
8/ Treatment Plants - Shute Creek (1,200 MSCFD); Craven Creek (400 MSCFD); and East Dry Basin (1,200 MSCFD) locations.
9/ Phase I Lincoln County at 600 MSCFD.
10/ Phase II Sweetwater County at 720 MSCFD.
11/ An acceptable individual annual risk for a sensitive receptor to a significant dose of H_2S [500 parts per million (ppm) instantaneous or 100 ppm for 15 minutes] has been determined to be 3 chances in 100,000.
12/ The numbers shown are peak annual estimates; peaks for construction and operation would occur in different years; seasonal peaks may be somewhat higher than the numbers shown in this table.

When Exxon decided to proceed with their plans to construct the remaining three processing modules they wanted to increase the processing capacity of each module from 200 MSCFD to 240 MSCFD. This was as a result of their reevaluation of the capability of the advanced technology being incorporated into the module construction. In screening this increase, Exxon found that the results of the air quality modeling performed, using the Shute Creek meterological data, showed that because of area topography the maximum capacity which could be processed at the Shute Creek site (Section 14, T. 22 N., R. 112 W.) and still be in compliance with Wyoming Air Quality standards and regulations, was a little more than 600 MSCFD. Therefore, in view of maximizing operational efficiencies, Exxon applied to the BLM for a right-of-way to relocate the three remaining modules in Sections 18 and 19 of T. 22 N., R. 111 W., 1.75 miles east into Sweetwater County (Figure 1-2). This was selected by Exxon as the best alternative and is the basis of Exxon's revised project description .

Therefore, the proposed Phase II of Exxon Corporation's (Exxon) LaBarge Project would locate three of the six modules in Sweetwater County, Wyoming. Exxon's results of air modeling show that compliance with Wyoming Air Quality Standards and Regulations can be achieved. Exxon's total capacity to sweeten sour gas (remove hydrogen sulfide) would also be increased from 1,200 MSCFD to 1,320 MSCFD.

On January 14, 1985, the Rock Springs District received a right-of-way application and a revised project description from Exxon for their proposed Phase II facilities.

On April 22, 1985, the Rock Springs District received a right-of-way application for a Phase II Feed Gas Trunkline which was described in the revised project description submitted in January 1985.

On April 30, 1985, Exxon applied to the Rock Springs District for a right-of-way for a helium recovery unit at the Shute Creek (Phase I) site.

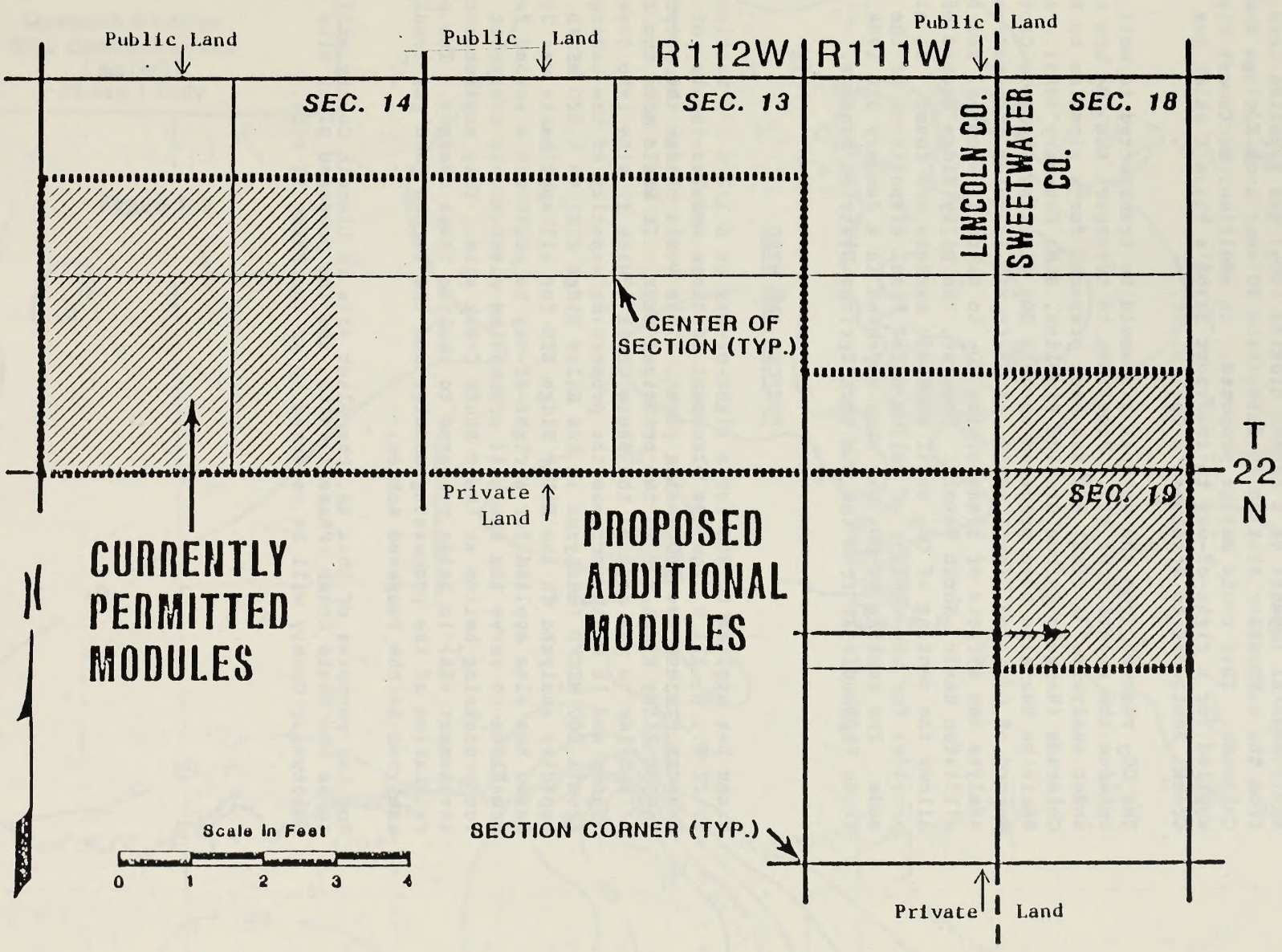
PRESENT

The three modules proposed in Phase II would have a processing capacity of 720 MSCFD. The three Phase II modules would be located in Sweetwater County (Figure I-2) and would be in conjunction with the previously permitted compressor station which will be constructed in the southeast quarter of Section 18, T. 22 N., R. 111 W. (EA No. WY-042-EA84-82). The facilities would also be located in NE 1/4 Section 19, T. 22 N., R. 111 W., which is private land owned by Exxon.

In addition, to transport well field gas for this processing capacity, Exxon proposes to construct a 28-inch diameter feed gas trunkline parallel to the already permitted 28-inch diameter trunkline (EA No. WY-041-EA4-97). The proposed second trunkline would be about 50 feet to the west of the permitted trunkline and pass through portions of Sublette, Lincoln, and Sweetwater counties. The second trunkline would be approximately 40 miles long and would be capable of transporting from 150 to 960 MSCFD of gas. Exxon does not currently propose to build compressor facilities for transporting gas in the trunkline. Pipeline block valves would be installed at a spacing identical to the first trunkline.

Figure I-2

SHUTE CREEK GAS PROCESSING PLANT SITE



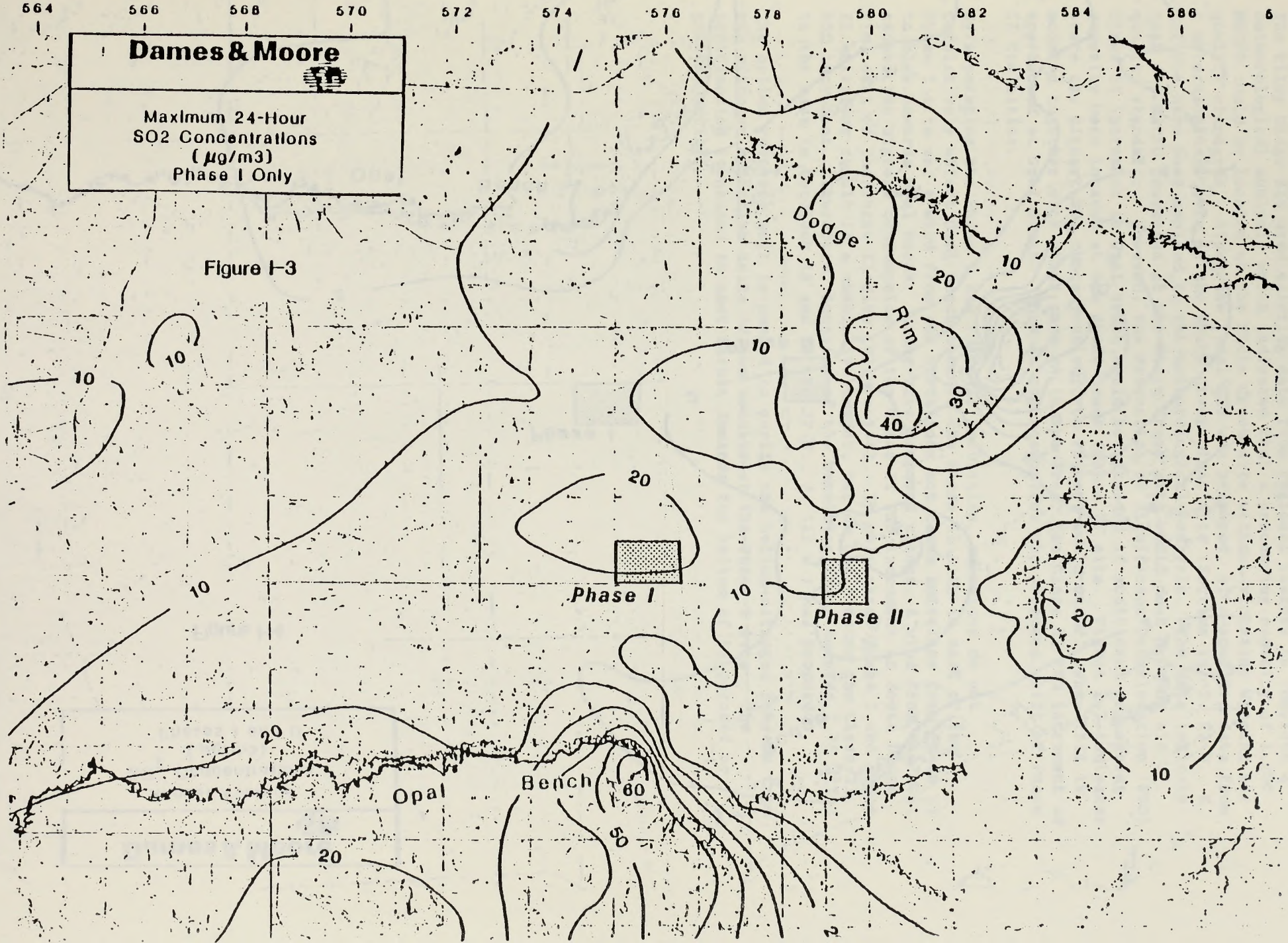
The Phase II proposal would enable Exxon to process a total of 1,320 MSCFD of sour gas (Phase I and Phase II combined). This is an increase of 120 MSCFD from the capacity that was analyzed for Exxon in the Riley Ridge EIS (Table I-1). The sales gas (methane) would be transported from Exxon's facilities in Sweetwater County by pipeline along an alignment that has not yet been determined. In the recent Rangely Carbon Dioxide Pipeline EIS, the environmental impacts of a carbon dioxide (CO_2) gas pipeline were analyzed from the compressor station to Interstate 80 near Rock Springs and to Rangely, Colorado. This route may be proposed. In addition, Northwest Pipeline has applied for a right-of-way to transport Exxon's Phase I sales gas from Shute Creek, Southwest to Northwest's Opal plant.

The CO_2 removed from the natural gas would be transported to well fields to enhance the recovery of oil. Pipelines to transport the CO_2 are currently under analysis. A final EIS has been prepared for a pipeline to Rangely, Colorado (Rangely Carbon Dioxide Pipeline, BLM, February 1985). A Record of Decision has also been prepared on this CO_2 pipeline (Rangely Carbon Dioxide Record of Decision, April 1985). A draft EIS is being prepared which will analyze the effects of transporting CO_2 to Bairoil, Wyoming, and to Williston Basin, North Dakota. However, the Riley Ridge Record of Decision allows the venting of CO_2 until economic markets are found. It also provides for the venting of helium until final disposition of the gas can be made. The venting of CO_2 was also approved in a January 31, 1984, letter to Exxon (Appendix 1) from the BLM Rock Springs District Manager.

PURPOSE AND NEED

Exxon has applied to BLM for a right-of-way on S 1/2 S 1/2 Section 18, T. 22 N., R. 111 W. for the placement of three modules (units) of their LaBarge Project gas processing plant. This would change the proposal approved in the Riley Ridge ROD in two principal ways. It would move the three modules 1.75 miles to the east of the Shute Creek (Phase I) site into Sweetwater County and it would increase the processing capacity of the LaBarge Project from 1,200 MSCFD (analyzed in the Riley Ridge EIS) to 1,320 MSCFD. The total capacity analyzed in the Riley Ridge EIS for all applicants was 2800 MSCFD. Exxon has also applied for a right-of-way to construct a second feed gas trunkline to serve the Phase II processing plant and to construct facilities for processing helium at their Shute Creek site. This environmental assessment (EA) is being prepared to analyze these changes. The proposed relocation of the processing modules and the second feed gas trunkline will be analyzed as the Proposed Action.

For the purposes of this EA, the plant site in Lincoln County will be referred to as the Shute Creek (Phase I) site, and the proposed plant site for Sweetwater County will be referred to as the Phase II site.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Dames & Moore
Maximum 24-Hour
SO2 Concentrations
(µg/m3)
Phase I Only
Figure I-3
Dodge
Rim
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Phase I
Phase II
Opal
Bench
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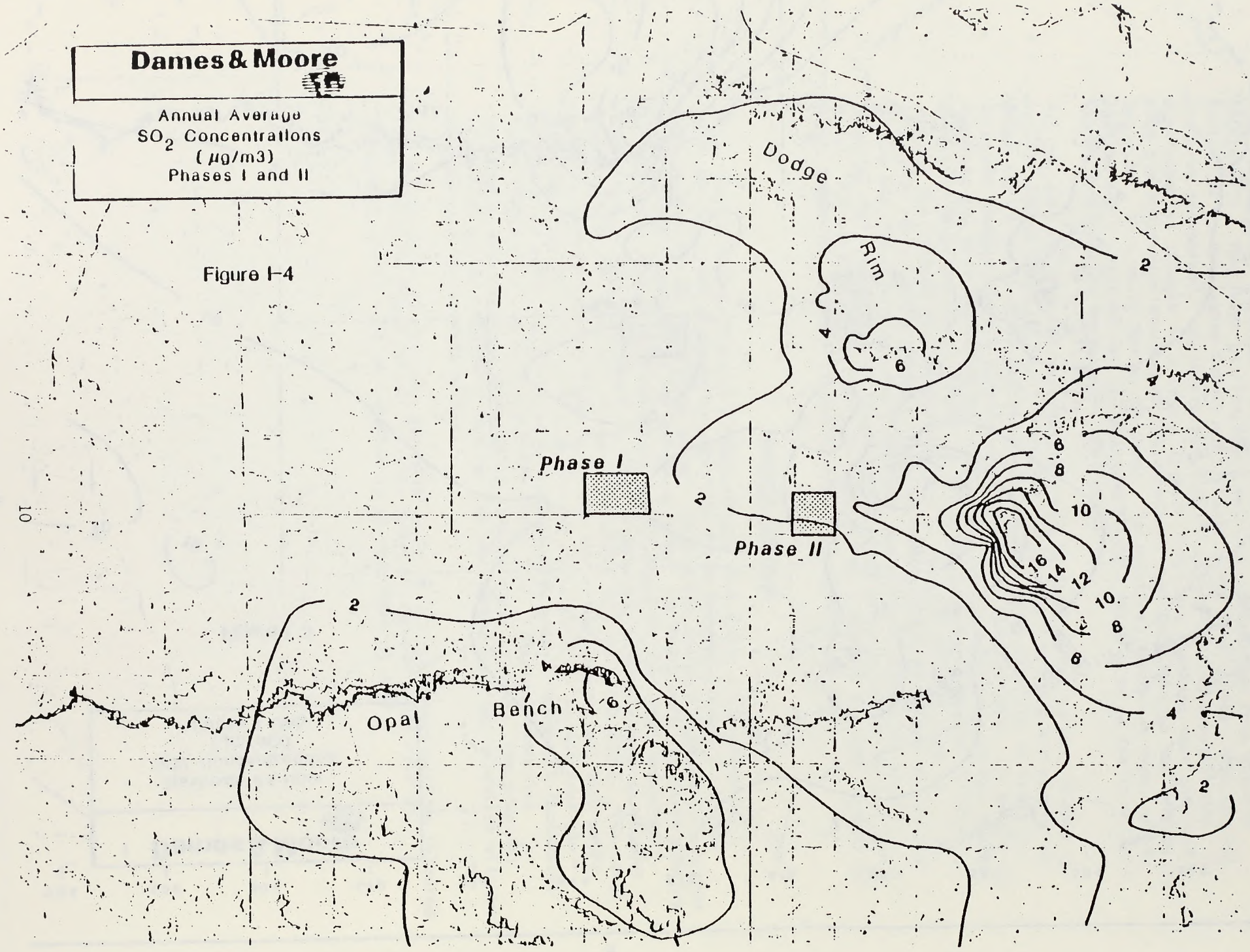
Dames & Moore
Annual Average
SO_2 Concentrations
(µg/m3)
Phases I and II
Figure I-4
Dodge
Rim
Phase I
Phase II
Opal
Bench
2
4
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The Riley Ridge EIS used existing data from regional sources to complete a meteorological analysis which indicated that a processing capacity of 1,200 MSCFD could be located at the Shute Creek site without violating Wyoming air quality standards. Since the final EIS was prepared, site-specific data from a meterological tower at the Shute Creek plant site (Section 14, T. 22 N., R. 112 W.) have been applied to the meteorological analysis. The data indicate that 600 MSCFD processed at the Shute Creek site would meet Wyoming air quality standards. However, the Prevention of Significant Deterioration (PSD) Class II increment at Opal Bench would be exceeded if additional processing capacity were located at the Shute Creek (Phase I) site. Figure I-3 indicates where the highest SO_2 concentration from Phase I would occur. When this is modeled together with other sources in the area, the Class II PSD increment is approached at Opal Bench. This is the reason for the proposed shift of Phase II facilities.

By separating the Phase I and Phase II facilities, emissions do not cumulatively affect Opal Bench because the Phase II site is east of the Phase I site and a wind from the north does not cause emissions from Phase II to blow towards Opal Bench. Under this proposed change, a wind from the west causes the highest consumption of the Class II PSD increment at South Dodge rim, east of the Phase II site (Figure I-4). In this case, Phase I and Phase II emissions result in a cumulative impact, but do not consume the Class II PSD increment. Therefore, location of the remaining three modules 1.75 miles to the east in Sections 18 and 19 (T. 22 N., R. 111 W.) was proposed.

The helium recovery unit is needed to purify the helium-nitrogen streams from the nitrogen rejection units of two modules at the Phase I site. The purification is needed to meet market demands for helium of 99 percent or greater purity.

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

PREVIOUSLY AUTHORIZED ACTIONS

The facilities already permitted under Phase I include three gas processing modules (up to 600 MSCFD) and associated facilities such as:

- sanitary sewage facilities for plant personnel;
- sedimentation ponds;
- evaporation pond;
- feed gas trunkline; and
- two mancamps for construction personnel.

Other facilities associated with Phase I and approved at the Phase II site include:

- a CO_2 compressor and metering station; and
- an electric metering substation.

A 500-foot wide utility corridor between the Shute Creek plant site (Phase I) and the Phase II plant site has been approved (EA No. WY-042-EA84-82). It would contain:

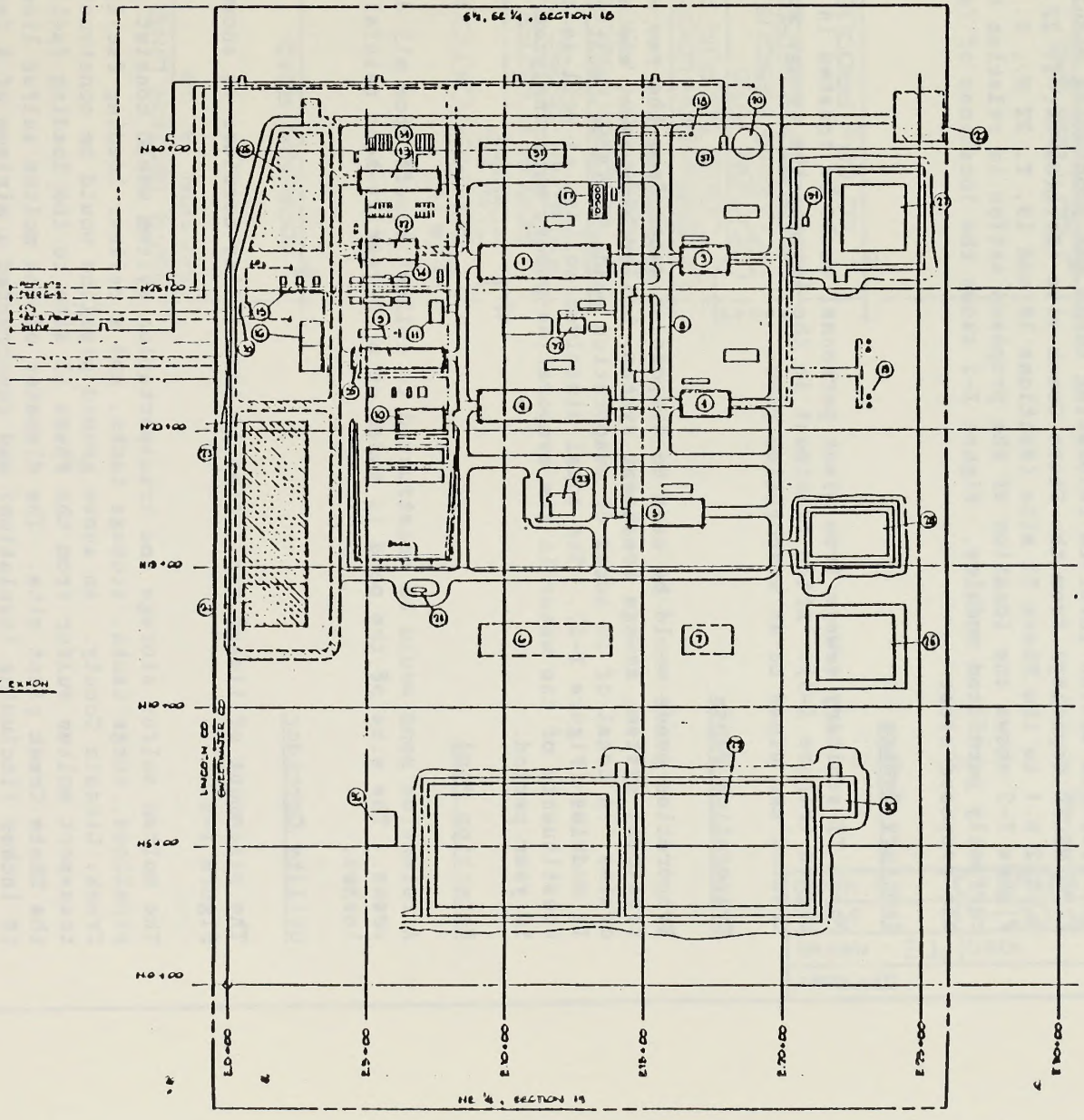
- a 24-foot wide access road (1.75 miles long);
- a 36-inch diameter pipeline for CO_2 (1.75 miles long);
- a 230 kV transmission line (1.75 miles long) - owned and maintained by Exxon; and
- a methane pipeline (1.75 miles long, as part of the methane pipeline described in the Riley Ridge EIS).

In addition, a 12.8 mile long 230 kV transmission line, presently under construction by Pacific Power and Light from the New Monument switch station to the substation at the Phase II facilities, has been authorized.

PROPOSED ACTION

The BLM has reviewed Exxon's application to the Wyoming Industrial Siting Administration (ISA) for Phase II of the LaBarge Project. The detailed description of the proposed action provided therein is adequate for the purpose of analyzing environmental impacts and for BLM's decision associated with the proposal. The proposed action will therefore be summarized in this EA. For a detailed description refer to Exxon's application to ISA, February 1985, (Volume 1, Chapter 2). The facilities proposed to be located on the Phase II site are shown on Figure I-5. The proposed facilities for Phase II, for which BLM would have to issue rights-of-way, include:

Figure I-5



1. PROCESS BLDG # 1
2. PROCESS BLDG # 2
3. GAS TOU # 1
4. GAS TOU # 2
5. UTILITY BLDG
6. PROCESS BLDG # 3 - FUTURE
7. GAS TOU # 3 - FUTURE
8. H_2S/CO_2 RECYCLE COMPR
9. N_2/METH COMPR
10. REFRIG COMPR
11. CO_2 L.P COMPR
12. CO_2 SALES COMPR - PHASE I
13. CO_2 SALES COMPR - PHASE II
14. SWEET GAS DEHYDRATION - #1 & #2
15. REGEN GAS HEATERS
16. NRU - BY OTHERS
17. MISC STORAGE
18. CO_2 VENT STACK
19. FLARE STACKS
20. SULFUR HOLDING TK.
21. PROPANE STO
22. CO_2 SALES METERING - PHASE I - BY EXXON
23. ELECT SUB-STA - PHASE I
24. FP&L METERING STA - PHASE I
25. SEDIMENTATION POND # 1 - PHASE I
26. SEDIMENTATION POND # 2 - PHASE II
27. FIREWATER POND
28. QUENCH WTR POND
29. EVAPORATION POND
30. SEWAGE TREAT LAGOON
31. SHOP/WHS BLDG
32. GLYCOL/WTR HEATING BLDG
33. CONTROL BLDG
34. CO_2 PRODUCT PUMPS
35. L.P N_2 BLOWERS
36. REGENERATION GROUND FLARE
37. SULFUR HOLDING TANK PUMPS
38. PIG RECEIVER AREA
39. FIREWATER PUMP HOUSE

SITE PLAN NOTES

I. VERTICAL DATUM - M.P. FINISHED FLOOR IN PROCESS BLDG IS 100'-0"

II. THE COORDINATE (GRID) SYSTEM IS THE SAME AS PHASE I.

III THE LOCATION OF BUILDINGS, ROADS, PIPERACKS & ETC IS IDENTICAL TO PHASE I (SAME COORDINATES & SAME RELATIVE POSITION) W.I.T.H THE FOLLOWING EXCEPTIONS:

1) SHOP/WHS IS IN DIFFERENT LOCATION

2) NORTHERN-MOST PRIMARY PLANT ROAD MOVED NORTH APPROX 100' FROM PHASE I LOCATION

IV NOTABLE DELETIONS (PHASE II VIA PHASE I)

1) NO ADMINISTRATION BUILDING
2) NO SULFUR LOADING FACILITIES
3) NO SLUG CATCHER

V NOTABLE ADDITIONS (PHASE II VIA PHASE I)

1) CO_2 SALES COMPR. BLDGS - PHASES I & II
2) CO_2 SALES METERING (BY EXXON)

VI CROSS-HATCHED AREAS DENOTE PHASE I WORK

PRELIMINARY ISSUE
PHASE II - SITE PLAN
FOR PERMITTING PURPOSES

SCALE = 1"=200'-0"

EXXON - PHASE I

three 240 MSCFD capacity gas processing modules;
sanitary sewage facilities for plant personnel;
evaporation ponds;
a retention pond, tailgas unit quench pond, and firewater pond;
an office, shop, and warehouse complex;
a 40-mile feed gas trunkline;
helium storage, transportation, and processing facilities;
additions inside 400-foot wide utility corridor
    molten sulfur pipeline,water pipeline,
    feed gas pipeline, and a
    crude helium pipeline; and
expansions of both mancamps associated with Phase I.

Gas Processing Modules

The proposed action involves relocating three gas processing modules (720 MSCFD capacity) from the Shute Creek site (Section 14, T. 22 N., R. 112 W.) to the Phase II site (Sections 18 and 19, T. 22 N., R. 111 W.). Figure I-2 shows the location of the proposed action in relation to the currently permitted modules. Figure I-5 shows the locations of facilities on the proposed site.

Sanitary Sewage

Phase II sanitary sewage from plant personnel would be treated in an aerated lagoon (Figure I-5). After treatment in the lagoon, the sewage would be treated and piped to an evaporation pond.

Evaporation Ponds

Evaporation ponds would be used to dispose of water from the raw water treatment system, sewage treatment system, boiler blow down, and miscellaneous drains. A total of 18 acres of evaporation ponds would be built for the Phase II modules (Figure I-5). The total dissolved solids, as well as the main constituents of the water in the evaporation ponds, were analyzed for a 50 year period.

Retention Pond

A retention pond would be constructed to collect runoff from all disturbed areas. The size of the pond is based on a 10-year 24-hour rainfall of 1.43 inches.

Utility Corridor

The placement of linear facilities in the utility corridor is shown on Figure I-6.

The molten sulfur storage and transportation system would consist of pipelines, surge tanks, storage tanks, and a railcar loading facility at Shute Creek, Lincoln County. An above ground pipeline would be constructed to transport molten sulfur from the Phase II site to the loading facilities at the Shute Creek plant site. The diameter of the molten sulfur line would be 18 inches (including insulation) and constructed a minimum of 4 feet off the ground to ensure that pronghorn antelope passage is not impeded.

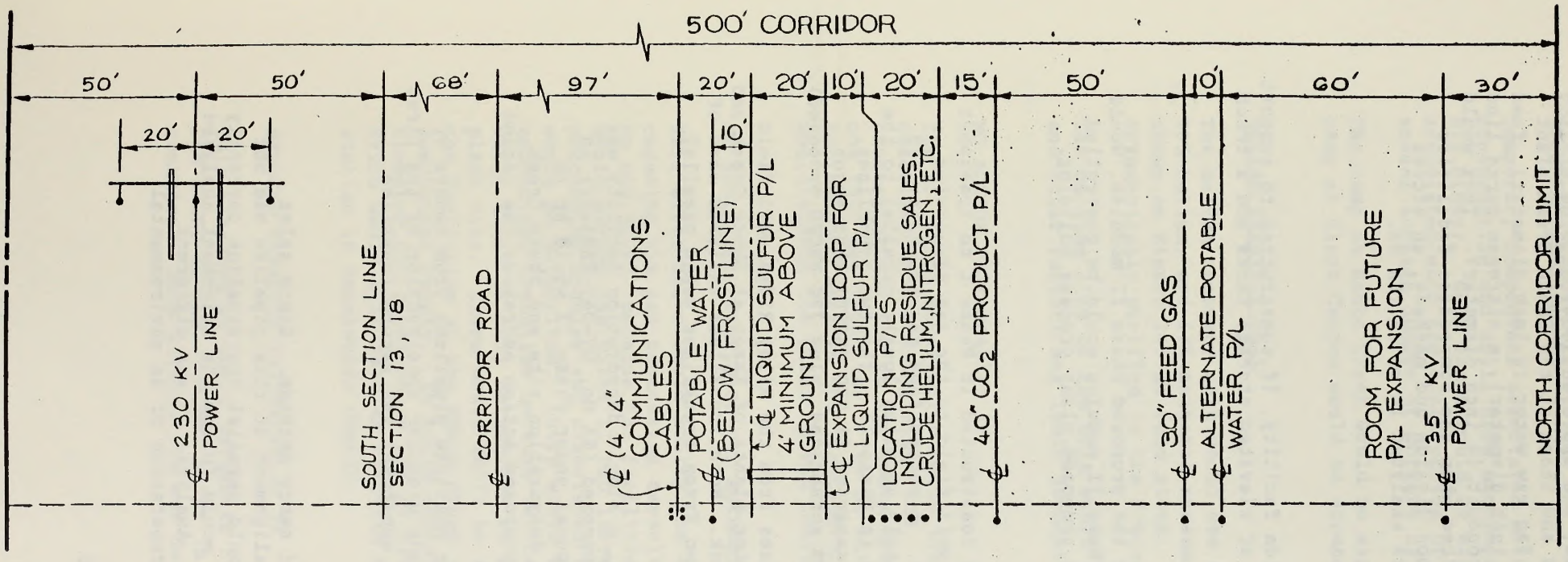


Figure I - 6

ORDER No	C-27970	PHASE II – TYPICAL SECT	
SCALE	1" – 30' 3/26/85	PIPELINE CORRIDOR	
DRAWN E.L.	CHECK		
APPROVED		Stearns Catalytic	STEARNS CATALYTIC CORPORATION DWG. N

In addition to the molten sulfur pipeline, the approved 500-foot wide utility corridor between the Phase II facilities and those at the Shute Creek plant site would also contain other pipelines for raw water (4 inch diameter), feed gas (30 inch diameter), crude helium (6 inch diameter), a nitrogen purge line (6 inch diameter), and a communication conduit (4 inch diameter). They would parallel the pipelines previously permitted when the compressor facilities were authorized. The pipelines for carbon dioxide and methane, an access road, and a 230 kV transmission line were analyzed in an EA (EA No. WY-042-EA84-82).

Helium Storage and Transportation

A liquid helium storage and transportation facility, if constructed to support the Helium Recovery Unit, would consist of elevated storage tanks and a truck loading facility.

Miscellaneous Facilities

An office and shop complex, located near the proposed Phase II modules, would serve those modules (Figure I-5). The Phase II modules would be controlled from a control building located near the proposed plant process building.

Feed Gas Trunkline

A 38.5 mile (sour gas) trunkline will be constructed in Phase I to transport dry gas (still containing H_2S) from the well field to the gas processing facilities at the Shute Creek plant site. A second feed gas trunkline (28 inches in outside diameter and approximately 40 miles long), parallel to the first (EA No. WY-041-EA4-97) is proposed in Phase II. The two trunklines would have approximately 600 MSCFD more capacity (1,920 MSCFD) than Exxon would be authorized to process (600 MSCFD authorized, plus 720 MSCFD proposed).

The Riley Ridge EIS analyzed two trunklines from the Riley Ridge well field area, south to the then proposed processing plants of Exxon at Shute Creek and Northwest Pipeline Company at Craven Creek. Both trunklines analyzed were of the same size (30-inch diameter). The two Exxon trunklines would parallel each other for 38.5 miles.

After preparation of the Riley Ridge EIS, a single dehydration facility was proposed and subsequently analyzed and approved (EA No. WY-049-EA85-32) in Section 35, T. 28 N., R. 114 W. The proposal under Phase II would be to construct a second trunkline between the dehydration site and Shute Creek (Phase I) and Phase II facilities. The proposed action addresses the second pipeline.

Exxon has also obtained rights-of-way for multiple pipelines from owners of private land to be crossed. The haul roads used for construction of the first feed gas trunkline would also be used to construct the second trunkline.

Sales Gas (Methane) Pipeline

The sales gas pipeline for Phase II would carry methane. Since sales agreements have not been finalized, the alignment of this pipeline has not been determined. It is likely that it would parallel the pipeline currently authorized for sales gas from Phase I or would follow the alignment analyzed in the Rangely CO_2 EIS to Interstate 80. Analysis of any different alignment will be accomplished through preparation of an environmental assessment.

Temporary Facilities

Temporary components associated with Exxon's LaBarge Project include two construction and drill crew mancamps at Shute Creek and Black Canyon (south of Big Piney). Both camps would be expanded to accommodate the workforce associated with the construction of Phase II facilities. Estimates of the annual acreage number of workers by year are shown on Table II-7.

The camp at Shute Creek would be expanded from 1,175 to 1,800 workers. The camp at Black Canyon would be expanded from 300 to 1,000 workers.

Helium Recovery Unit

The helium recovery unit would use crude helium (approximately 49% nitrogen, 50% helium, and 17% methane) stream from the Nitrogen Rejection Unit (NRU) shown on Figure 1-5 as feed stock. The gas stream would be dehydrated and cryogenically purified in the Pressure Swing Absorption Towers.

The on-line life of the unit would be 50 years. However, market conditions and other factors may limit production levels and the unit's project life.

NO ACTION (Alternative 1)

The No Action alternative would limit approval of the facilities to those described in the Riley Ridge ROD. This would be the construction of six processing modules at the Shute Creek Site with a capacity of 1,200 MSCFD and one sour gas trunkline. The No Action alternative, however, cannot be implemented because the location of additional modules at the Shute Creek site would exceed the Class II PSD increment at Opal Bench.

NO ADDITIONAL RIGHTS-OF-WAY AUTHORIZED (Alternative 2)

This alternative would modify the Riley Ridge Natural Gas Project ROD by reducing the gas processing capacity for Exxon by 50 percent (from 1,200 MSCFD to 600 MSCFD) because the facilities at the Shute Creek site (Lincoln County) would exceed the Class II PSD increment. Neither the remaining three gas processing modules and associated facilities nor the second feed gas trunkline would be authorized. There would be 360 MSCFD reserve capacity in the authorized trunkline because the capacity of the trunkline would be 960 MSCFD while Exxon is only authorized to process 600 MSCFD of gas at the Shute Creek plant site. There would still be a utility corridor (1.5 miles long) between the facilities at the Shute Creek site and the compression facilities in Sweetwater County. It would contain a 24-foot wide access road, a 40-inch diameter CO_2 pipeline, a 230 kV transmission line, and a methane pipeline. Exxon would also have an electric metering substation and a CO_2 compressor station in Sweetwater County.

REDUCED CAPACITY (Alternative 3)

This alternative would authorize Exxon a total gas processing capacity of 960 MSCFD at the combined sites in Lincoln (Phase I) and Sweetwater (Phase II) counties. This alternative was developed for several reasons:

1) There was public controversy surrounding authorization of the first feed gas (sour gas) trunkline. This alternative was designed to eliminate similar controversy on Phase II.

2) The 1,200 MSCFD of capacity at the Shute Creek site (Lincoln County) described in the Riley Ridge Record of Decision could not be approved because it would violate Class II PSD increments at Opal Bench, south of the Shute Creek plant site. In addition, Exxon's proposal provides a processing capacity of 1,320 MSCFD, which is more than the 1,200 MSCFD approved in the Riley Ridge ROD (primarily because the processing capacity of the modules has been reevaluated by Exxon).

3) Exxon does not currently have committed markets for the CO_2 or the methane that would be produced from a processing capacity of 1,320 MSCFD. They are engaged in negotiations to secure sales agreements.

The authorizations for the Shute Creek site in Lincoln County would have to be amended to permit Exxon a maximum Phase I gas processing capacity of 480 MSCFD because they are currently authorized for a gas processing capacity of 600 MSCFD. This would have to include amended authorizations from the State of Wyoming. Exxon would also be permitted a maximum Phase II gas processing capacity of 480 MSCFD. The combined maximum capacity of 960 MSCFD would eliminate the need for a second feed gas trunkline because the capacity of the authorized trunkline (960 MSCFD) would be adequate to supply Exxon's processing modules. Since Exxon has already been granted authorization to operate at a 600 MSCFD capacity at the Shute Creek site, they would have to agree to the amendments reducing their permitted capacity.

The right-of-way for the second sour gas trunkline would not be needed.

The facilities onsite would be very similar to those described for the proposed action except that only two units, instead of three, would be built at each of the two sites. The fenced area around the facilities and the utility corridor between the two sites would be the same as under the proposed action.

CHAPTER II

CHAPTER II

AFFECTED ENVIRONMENT/ENVIRONMENTAL CONSEQUENCES

The affected environment described in the draft EIS and supporting technical reports for the Riley Ridge Natural Gas Project include the areas affected by the proposed gas processing facilities and feed gas trunkline. In addition, Exxon's application to the Wyoming Industrial Siting Administration (ISA) for Phase II contains numerous maps and tables which identify the environmental components potentially affected by Phase II facilities including the utility corridor between Phase II, the Shute Creek plant site, and the corridor for the second feed gas trunkline from the well field.

The environmental impacts described in Chapter 4 of Exxon's application to Wyoming ISA for Phase II adequately address the expected impacts in detail. A summary of those impacts is provided below by resource. Exxon's committed mitigating measures described in the Riley Ridge Record of Decision (ROD) and the voluntary measures committed to by Exxon in their permit (No. ISC-83-4) from the Wyoming Industrial Siting Council were considered in analyzing the impacts. The impacts described are those that would not be mitigated by the Exxon committed measures. A brief comparison table is provided for some of these important considerations (Table I-1).

The Riley Ridge EIS describes environmental impacts and significance thresholds for those impacts. The following analysis describes site-specific considerations that were not taken into account in the Riley Ridge EIS and evaluates changes from the proposal for Exxon in the Riley Ridge EIS.

PROPOSED ACTION

Air Quality

None of the air quality impacts appear to violate air quality standards. The most critical measure for meeting air quality standards appears to be the Class II Prevention of Significant Deterioration (PSD) increments. It was the potential for exceeding these increments at Opal Bench (south of the Shute Creek plant site) that resulted in the proposal to relocate the three gas processing modules in the proposed action.

The major source of air pollution during construction of Phase II would be fugitive dust (Table II-1). The highest fugitive dust emissions would occur in 1986, much of it from employee traffic on unpaved roads. The magnitude of this impact would decrease in the long term when construction is complete and traffic is reduced. Many of these particulates are fairly large and settle out quickly. Respirable particulates are smaller and make up about 50 percent of the particulates. The fugitive dust emissions should be compared to ambient air quality standards. This comparison indicates that these short-term impacts would be acceptable.

Estimated annual emissions for various air pollutants from the LaBarge Project are above and below the concentrations estimated for Exxon in the Riley Ridge EIS, but the emissions are all below the concentrations estimated for all applicants in the Riley Ridge EIS (Table I-1). The Riley Ridge ROD specified that if there were delays in project plans by any of the applicants, additional analysis could be required before the projects were permitted because of changes that may occur from that which was addressed in the EIS.

EXXON LABARGE PROJECT PHASE II
WYOMING INDUSTRIAL SITING APPLICATION

Table II-1

Summary of Fugitive Emissions Phase II (tons/year) from Construction

Source	Year 1985	1986	1987	1988
Gas Treatment Plant Construction	1,102	1,655	1,655	553
Corridor Construction	--	380	--	--
Employee Traffic on Unpaved Roads	3,605	5,369	2,890	252
Construction of feed gas pipeline	--	--	160	--
TOTAL	4,707	7,404	4,705	805

Source: ERT 1984

Tables II-2 and II-3 show maximum modeled pollutant concentrations. Modeling was conducted using the Environmental Protection Agency approved PTPLU and COMPLEX I models. The Bridger and Fitzpatrick Wildernesses are the only Class I areas in the vicinity. Maximum concentrations would not exceed either the National Ambient Air Quality Standards (NAAQS) or the Wyoming Ambient Air Quality Standards (WAAQS). The maximum consumption of the available 24-hour sulfur dioxide increment would be 96 percent. This includes both Phases I and II of the LaBarge Project, Whitney Canyon, Texas Gulf, Tenneco, and Chevron Phosphate facilities.

Acid deposition rates have been estimated and are shown in Table II-4. The acid deposition rates are not expected to be significant. The pH change in Bridger Wilderness lakes from the Phase II project would be less than 0.0002 pH units. The cumulative impact of Phase II facilities and other sources would result in a change of less than 0.03 pH units in sensitive lakes.

This issue of acid deposition is very complex and extremely difficult to estimate. To derive estimates, ambient concentrations of acidifying pollutants were modeled and then, as a conservative assumption, were considered to all fall upon the ground. This deposition amount was then added on to the known or modeled background deposition rates to determine a total value.

An often times quoted significance level for deposition, taken from studies of acid sensitive watersheds in Scandinavia, may be as low as 4.5 kilograms per hectare per year (KG/HA-yr) or as high as 7.0 KG/HA-yr. At this rate of deposition, acidification of the watershed and ecological damage is considered likely to occur over time. At present, no significance level of deposition has been established for the Rocky Mountains of the United States.

Data on actual rates inside of the Jim Bridger and Fitzpatrick wilderness area are at present, incomplete. It has been suggested that the existing rate of deposition in the wilderness areas may be above that measured at the Half Moon and Exxon National Acid Deposition Program (NADP) sites. The values at these sites are higher than at other sites because they are closer to the plant site. Due to the fact that all areas in the region receive rainfall containing more or less the same pollutants, the wilderness probably receives the same concentrations of pollutants in each unit volume of rainfall as the NADP sits. Since more rainfall can be expected at the higher wilderness elevations, there is more deposition of acidifying compounds. Therefore, the actual acid deposition may be somewhat higher than indicated on Table II-4. This is called the "orographic effect".

The monitoring of NADP sites currently underway will help to determine levels of significant acid deposition in the area, actual acid deposition rates, and the influence of the orographic effect.

Table II-2

COMPARISON OF MAXIMUM PREDICTED GROUND-LEVEL CONCENTRATIONS (ug/m^3)
FROM THE PROPOSED LA BARGE PLANT PHASES I AND II AND ALL OTHER
EXISTING SOURCES[1] WITH APPLICABLE WYOMING AMBIENT AIR QUALITY STANDARDS (WAAQS)

Pollutant	Averaging Period	Receptor Location from Exxon (km)		Predicted Conc. Proposed and Existing Sources	Background[2] Conc.	Total Conc.	WAAQS
Sulfur Dioxide	Annual	36	SE	25	5	30	60
	24-hour	36	SE	173	24	197	260
	3-Hour	54	W	1,064	39	1,103	1,300
Nitrogen[3] Dioxide	Annual	36	SE	19	4	23	100
Hydrogen Sulfide	1/2 Hour[4]	0.6	NE	13	14	27	40[5]
Carbonyl Sulfide	Annual	4	ESE	12	0	12	300[6]
	1-Hour	0.6	NE	257	0	257	714[6]

[1] See text for a listing of the sources included in this analysis.

[2] Extracted from Table 7-1. Background includes contributions from existing sources that were also modeled, and is therefore conservative.

[3] The conservative assumption was made that all nitrogen oxide emissions from the modeled facilities were in the form of nitrogen dioxide.

[4] Comparisons were made to modeled 1-hour concentrations as recommended by the Wyoming Department of Environmental Quality (WDEQ).

[5] Standards of both 40 and 70 ug/m^3 exist for hydrogen sulfide.

[6] Concentration limits proposed by WDEQ to protect against adverse health effects.

Table II-3

MAXIMUM PREDICTED GROUND-LEVEL CONCENTRATIONS OF SO_2
COMPARED TO ALLOWABLE PSD INCREMENTS

	CLASS II			CLASS I		
Averaging Period	Maximum Predicted Concentration (ug/m^3)	Allowable Class II Increment (ug/m^3)	Percent Increment Consumption	Maximum Predicted Concentration (ug/m^3)	Allowable Class I Increment (ug/m^3)	Percent Increment Consumption
Exxon Phase I Only						
3-Hour	296	512	57.8	1.47	25	5.9
24-Hour	65	91	70.3	0.26	5	5.2
Annual	5.7	20	28.5	0.02	2	1.0
Exxon Phase II Only						
3-Hour	228	512	44.5	2.32	25	9.3
24-Hour	62	91	68.1	0.32	5	6.4
Annual	12.6	20	63.0	0.03	2	1.5
All PSD Increment Consuming Sources						
3-Hour	297	512	58.0	18.8	25	75.2
24-Hour	73	91	80.2	3.8	5	76.0
Annual	17.4	20	87.0	0.3	2	15.0

TABLE II-5

SCREENING CONCENTRATIONS FOR IMPACTS TO SOILS AND VEGETATION
COMPARED TO MAXIMUM PREDICTED CONCENTRATIONS

Pollutant	Averaging Time	ANL[1] Screening Concentrations (ug/m^3)	Maximum Predicted Concentrations (ug/M^3)[2,3]
SO_2	1-Hour	917	457
	3-Hour	786	297
	Annual	18	17
NO_2	4-Hour	3,760	53
	8-Hour	3,760	32
	Annual	100	3
H_2S	4-Hour	28,000	7

[1] Source: Argonne National Laboratory (ANL), 1980.

[2] LaBarge Gas Plant, Phases I and II, plus all other PSD sources, which included Carter Creek Gas Plant, Whitney Canyon Gas Plant, FMC Trona, Chevron Phosphate, and Tenneco Trona.

[3] Concentrations for various averaging times less than 24 hours have been estimated following factors outlined in "Guidelines for Air Quality Maintenance Planning and Analysis, Vol. 10" (EPA, 1977b)

Table II-4

Calculated Acidic Deposition Rates[a] in the Bridger Wilderness Area (kg/HA-yr)

Location	Baseline[b]				Baseline Plus Phase II			
	SO_2	NO_2	H_2S	COS	SO_2	NO_2	H_2S	COS
Hobbs Lake	0.68	0.10	0.001	0.003	0.85	0.11	<0.001	0.005
Section Corner Lake	0.76	0.10	0.001	0.006	0.99	0.11	<0.001	0.007
Black Joe Lake	0.76	0.14	0.001	0.004	0.85	0.14	<0.001	0.007
Seneca Lake	0.68	0.10	0.001	0.003	0.85	0.11	<0.001	0.005
Half Moon NADP	2.19	0.49	0.002	0.011	2.52	0.50	0.002	0.017
Exxon NADP	2.40	0.37	0.002	0.009	3.22	0.37	<0.001	0.014

Source: Exxon LaBarge Project-Phase II PSD Permit Application. (Dames and Moore 1984)

[a] Wet and dry deposition of sulfur and nitrogen from the compounds indicated.

[b] Existing sources at actual 1983 emissions, plus currently permitted Exxon Phase I 600 MSCFD plant, plus currently permitted Chevron Phosphate plant. Includes allowable and predicted upset and flaring emissions.

Predicted maximum concentrations of SO_2, NO_2, and H_2S would be below levels that could be expected to result in direct adverse effects to sensitive plants species. Screening concentrations established by Argonne National Laboratories (ANL, 1980) are those pollutant concentrations which will not have an adverse effect on sensitive plants used in the Argonne Study. These plants are listed in Exxon's Phase II PSD Permit Application on Table 10-1. The ANL screening concentrations are listed in Table II-5 along with the predicted maximum concentrations due to operation of the proposed Exxon Phase II facility and all other PSD facilities in the area (Phase I, Chevron Carter Creek Gas Plant, Whitney Canyon Gas Plant, FMC Trona, Chevron Phosphate, and Tenneco Trona). The results in the table indicate that no direct adverse impacts are expected on soils or animals. Because the predicted concentrations in all cases are below the screening concentrations, no further analysis is considered necessary for air quality effects on vegetation and soils. Synergistic effects are unlikely at the concentrations modeled (Dames and Moore, 1985).

Phase II facilities are not expected to cause visibility degradation in either the Bridger Wilderness Area or the Fitzpatrick Wilderness Area.

Modeled pollutant concentrations are based on permitted emissions (720 MSCFD for Phase II). Short-term emissions during flaring, start-up, and shut-down would be higher. Although the 720 MSCFD capacity considers each of the three modules to process 240 MSCFD, Exxon has applied to Wyoming DEQ to amend the PSD permit for which they applied. The amendment would allow Exxon to operate the first two units at the Phase II site at a processing capacity of 315 MSCFD each. Exxon's PSD permit for Phase I allows them to operate the first two units at the Phase I site at a capacity of 275 MSCFD each.

Venting from the helium recovery unit would result in the release of nitrogen, which does not fall within the PSD regulated constituents.

Soils

The facilities would be located in two general soil groups: (1) soils of the terraces and floodplains, and (2) soils of the rolling to moderately steep dissected upland, high terraces; sideslopes; and fans. Average annual precipitation is 7 to 9 inches. An estimate of the amount of acreage disturbed is found in Table I-1. Construction of the Proposed Action (Phase II trunkline and plant site) would disturb approximately 736 acres of soils. No significant impacts are anticipated for soils assuming compliance with the recommended soil protection measures. The well field acreage has already been analyzed in the EIS.

Water Resources

The construction of Phase II would divert and rechannelize a small ephemeral tributary to Shute Creek. No significant impacts are anticipated.

The new water treatment system is designed to reduce total dissolved and suspended solids. Water in the evaporation ponds would meet State of Wyoming standards for effluent quality. No adverse impacts on migratory birds are expected.

Discharges to Shute Creek would occur and include up to 70 gallons per minute (gpm) of treated domestic sewage (over a 4-year period) and about 121 gpm of good quality process water between 1990 and 2030, meeting Wyoming DEQ water quality standards. Shute Creek is an intermittent Class IV stream. These discharges are not expected to have an adverse impact on water quality.

Plant site (Phase I and II) water supply needs will be obtained from two existing wells located in the southeast quarter of Section 14, T. 22 N., R. 112 W. Plant site ground water demands would range from a maximum of 150 gpm during construction to 1.6 gpm during operation. There may be a 5 to 10 foot drawdown in two existing wells with permanent water rights located 2 to 5 miles from the Phase II plant site. A third water supply well will be applied for if required. These were analyzed in the Riley Ridge EIS.

Construction of the trunkline would cause only temporary impacts to ground water which would not be significant. Recharge is not expected to be adversely affected.

The probability of a rupture of the sour gas pipeline is estimated to be 1.1 chances in 100,000 mile-years (e.g., 1,000 miles of pipeline in operation for 100 years). Due to the small length of pipeline passing under perennial streams, the potential for a rupture affecting these streams is extremely small. In addition, since a major cause of pipeline rupture is human disturbance, the probability of a rupture would be even less under streams than on dry land.

The helium recovery unit would not result in additional process waste water.

Land Use

Excluding the well field about 736 acres of land in Lincoln, Sublette, and Sweetwater counties would be disturbed by Phase II (trunkline and plant site) project construction. Approximately 475 acres would be reclaimed, leaving 261 acres committed to industrial use for the life of the project. The disturbed acreage figures for the well field (Table I-1) have already been analyzed in the Riley Ridge EIS.

Approximately 44 animal unit months (AUMs) of forage would be lost during construction; 13 AUMs would be lost for the life of the project. This amount represents less than one percent of the total AUMs authorized within allotments that would contain project components.

The helium recovery unit uses catalysts which would require periodic disposal onsite as approved by Wyoming DEQ. Preliminary indications are that none of the catalysts qualify as hazardous waste.

Vegetation

Approximately 736 acres would be disturbed, of which 475 acres would be revegetated. The main vegetation types (71 percent) in the area of the Phase II plant site and the feed gas trunkline are big sagebrush and greasewood. Ground cover would reach its former extent in all vegetation types in about five years. Shrub cover would take between 10 and 50 years to reach its former extent.

No known federally listed threatened or endangered plant species would be affected by Phase II.

Wildlife

The increases in disturbance and in human population due to construction associated with Phase II would result in the following adverse temporary impacts to wildlife: increased hunting and fishing pressure, poaching, and some vehicle-animal collisions. The level of impact is expected to be within the level of impact described in the Riley Ridge EIS. Because the other applicant projects analyzed in the Riley Ridge EIS would not be constructed at or near the same time, the level of Exxon's Phase I and II combined impact is expected to be lower than the impacts described in the Riley Ridge EIS.

While the capacity of Exxon's modules has been recalculated, the number of modules remains the same and the acreage occupied by the modules is slightly smaller (Table I-1). The utility corridor between the Phase I and Phase II sites will result in a small amount of additional disturbance for Exxon facilities.

The Riley Ridge EIS analyzed an increase in road kills of big game up to 1,000 annually and a similar increase in poaching on wanton killing. The impacts from Phase I and the proposed Phase II are not expected to exceed these numbers.

The project is in critical yearlong pronghorn range. Exxon has funded an additional game warden in the area for three years. This combined with an environmental awareness program will help mitigate adverse impacts to wildlife from construction workers from Phase I and Phase II combined.

No threatened or endangered wildlife has been identified either at the location of the Phase II facilities, the utility corridor, or the trunkline route. The trunkline would pass through three miles of potential whooping crane habitat where it crosses Fontenelle and LaBarge Creeks. Because of the large area of habitat available both upstream and downstream and because construction would only be a short-term event, neither adverse impacts nor habitat loss are expected. The trunklines are expected to be only about 10 feet apart at these stream crossings rather than the nominal 50 foot spacing which will exist along most of the length of the pipeline. This and the procedure of constructing both pipeline crossings of LaBarge and Fontenelle Creeks at the same time (private land) would mitigate potential adverse impacts to both wildlife and habitat in the areas surrounding the stream crossings. Exxon's construction schedule would be timed to avoid coinciding with time periods when whooping cranes would use certain areas during migration and top-over. This, together with monitoring which will take place results in a "no effect" determination on this species.

Two unnamed small tributary drainages of Shute Creek cross the Phase II plant project area. The nearest plant facility is located about 500 feet form the 100-year floodplain of the north drainage. Runoff control measures would contain sediment within the project boundaries. Therefore, no downstream aquatic effects are expected.

Water would be withdrawn temporarily from the Green River during construction. The withdrawals (approximately 1.2 gpm) represent less than one percent of the lowest flow recorded at the gauging station below Fontenelle Reservoir. Facilities constructed for water withdrawal must comply with Wyoming Game and Fish design specifications. These would help eliminate entrainment problems. Therefore, no measurable effects on aquatic biota or endangered fish are expected.

Recreation

As a condition of the first Industrial Siting Permit, Exxon is working with the Wyoming Recreation Commission, the Forest Service, and BLM to help alleviate the shortfall in recreation facilities used by project workers. This would also occur for Phase II. The 1985 State Comprehensive Outdoor Recreation Plan (SCORP) provides baseline data on outdoor recreation needs.

Increases in recreation demand would occur in camping, driving for pleasure, hiking, fishing, horseback riding, and hunting. Most of this demand would be dispersed. A 13 percent increase in total recreation demand could be expected. Demand for hunting and fishing would expand about 30 percent. Most of this increase would occur between 1985 and 1990. The level of impacts is expected to be within the level analyzed in the Riley Ridge EIS. Because other applicants would not be implementing these proposals at or near the same time, the combined Phase I and Phase II impacts are expected to be below the level analyzed in the Riley Ridge EIS.

While the demand for hunting may increase, the harvests are controlled, by area, by the Wyoming Game and Fish Department. They can close areas, open areas to permits only or use other means to regulate pressure on big game populations. These measures would help mitigate impacts to big game populations.

Habitat loss through direct disturbance and the increased acreage being subjected to human presence would result in some reduction in the number of big game animals available for hunting/harvest.

The project-related disturbance would not affect recreational areas, access, or significantly reduce the recreation land base.

Under the Regional Recreation Monitoring Program, the impacts of Exxon's LaBarge Project on regional recreation impacts will be assessed.

Visual Resources

The facilities lie within the Wyoming Basin physiographic province. It has flat, sage covered, rolling lands with few distinguishing characteristics. The adverse effects of Phase II facilities on visual resources would be additive to the facilities which have been permitted. The impacts would be similar to and within the range of impacts described in the Riley Ridge EIS and the EA on the compressor station (EA No. WY-042-EA84-82).

Vegetation clearing, construction, and operations of the trunkline and plant facilities would be, for the most part, unnoticeable from highway viewing points.

Cultural Resources

Based on initial Class III surveys of the site of Phase II plant facilities, one additional site (in Section 18) would need to be mitigated (Summer 1985). The utility corridor between the Shute Creek plant site and the Phase II plant facilities in Sections 18 and 19 have been surveyed (400 feet wide). No significant sites were located on public lands. Two significant sites on private land were not mitigated.

Social and Economic Conditions

The construction and operation of the Phase II trunkline and plant facilities is expected to result in impacts to Sublette, Lincoln, and Sweetwater counties. These impacts were analyzed in the Riley Ridge EIS. This analysis provides information on pertinent changes to what was analyzed in the Riley Ridge EIS. The population increases from Phase II construction would overlap with the following projects: Chevron Phosphate Project, Rangely CO_2 Pipeline, Jim Bridger Power plant modification, the Bairoil/Williston Basin CO_2 Pipeline, and the Western Wyoming College Expansion. The greatest interaction between these projects would be in Rock Springs. The most interaction between construction-related populations of these projects can be expected in 1985, and to a lesser degree in 1986. The Proposed Action is expected to result in a peak workforce in the third quarter of 1985, while the Bairoil/Williston Basin pipeline is expected to hit peak workforce in the third quarter of 1986.

The population in Rock Springs fluctuated during 1980-1984, growing rapidly between 1980 and 1982, and dropping until mid-1984. The infrastructure and available housing is expected to be adequate to handle the population increase due to the interaction of these projects.

The communities potentially affected by Exxon's proposed Phase II would include:

Counties	Municipalities
Sweetwater	Rock Springs
	Green River
	Granger
Lincoln	Kemmerer
	Diamondville
	Opal
	LaBarge
Sublette	Big Piney
	Marbleton
	Pinedale

School Districts

Lincoln School District No. 1
Sweetwater School District No. 1
Sweetwater School District No. 2
Sublette School District No. 1
Sublette School District No. 9

The projected number of additional students from Phase I and II construction would exceed the optimal capacity during the peak years (Table II-6) only in Lincoln County. However, the school district's maximum capacity would not be exceeded.

Building the three modules and associated facilities would result in long-term but minor tax revenue increases to Sweetwater County. Tax revenues to Lincoln County would be slightly lower than those described in the Riley Ridge EIS and the Technical Report prepared in support of the EIS.

The average annual workforce associated with all Exxon LaBarge Project development (Phase I and II) is shown in Table II-7.

TABLE II-6
School District Projections

	Base	Project-Related	Peak 1/	Long-Term	Optimum
Lincoln No. 1	1,190	21 (1984-85) 190 (1990-91) 150 (1992-93)	2,002 (1992-93)		1,802
Sweetwater No. 1	5,758	17 (1984-85) 311 (1985-86) 15 (1992-93)	6,881 (1991-92)	6,871 (1992-93)	7,290
Sweetwater No. 2	3,780	67 (1984-85) 233 (1985-86) 120 (1992-93)	4,634 (1990-91)	4,557 (1992-93)	5,850
Sublette No. 1	628	46 (1985-86) 13 (1991-92)	680 (1985-86)	600 (1992-93) 1,403 (1988-89)	876
Sublette No. 9	704	107 (1985-86) 30 (1991-92)	714 (1985-86)	590 (1992-93)	1,041 1,601 2/ (1988-89)

1/ All students
2/ Additional facilities are planned for completion by 1988-1989.

TABLE II-7

ESTIMATED WORKFORCE 1985-1992

	1985	1986	1987	1988	1989	1990	1991	1992
All Worksites	3,417	2,662	1,840	1,149	1,117	1,511	576	508
Shute Creek	1,965	1,643	1,124	445	565	1,078	523	455
Construction	1,894	1,449	780	68	188	655	68	0
Operations	72	194	344	377	377	413	455	455
Specialized Const. Activities:	232	0	0	0	0	0	0	0
Wellfield	1,220	1,019	716	705	551	433	53	53
Construction	1,194	984	672	652	498	380	0	0
Operations	26	35	44	53	53	53	53	53

It is anticipated that a sizeable portion of the work force would come from local residents. Maximum use would be made of available housing in local communities. Use of construction camps, per diem, and busing would also help reduce adverse impacts to local communities. The expansion of Exxon's construction camps at Shute Creek and Big Piney would also help alleviate the project's adverse impacts to housing in local communities.

Population projections through 1992 indicate a slow, steady increase in each of the three counties (Tables II-8, II-9, and II-10).

The EA for the compression facilities and appurtenant components (EA No. WY-042-EA84-82) found that building the station in Sweetwater County rather than Lincoln County would result in long-term but slight revenue losses to Lincoln County and Lincoln County School District No. 1 and equivalent gains to Sweetwater County and Sweetwater County School District No. 2.

The Phase II proposals would result in more revenue for Sweetwater County (Table II-11). Table II-11 shows calculations for anticipated tax revenues based on projections for total investments in each county. The revenues for Sublette County would be from the second trunkline. Therefore, there would be no change from what was approved in the Riley Ridge ROD.

Health and Safety

The main component of the proposed Phase II facilities that affects public health and safety is the second feed gas trunkline. A right-of-way has been granted to Exxon to operate the first feed gas trunkline at an operating pressure of 1450 psi and a throughput of 960 MSCFD. Exxon's risk assessment for the first feed gas trunkline (Exxon, 1984) analyzed the risks of exposure of sensitive receptors (such as isolated ranches and industrial sites) to a significant or lethal dose of H_2S from a trunkline rupture.

Prior to the modeling done for this study, BLM determined that the individual annual risk of exposure to a significant dose (500 ppm instantaneous or 100 ppm for 15 minutes) must be less than 3 chances in 100,000. The risk of exposure to a lethal dose of H_2S (1,000 ppm instantaneous) must be less than 1 chance in 100,000. This was determined to be a "de minimus" risk category.

After the first feed gas trunkline is built and operating the second trunkline would be built. This would result in a situation where heavy equipment would be crossing over the first trunkline on haul roads. This may pose some additional risks. However, the risks of a rupture from such crossings is expected to be minimal. The potential for problems could be further reduced by a requirement for 95 percent compaction of fill where the haul roads cross the first trunkline.

With two trunklines, the pressure required to transport the maximum capacity of gas for the processing facilities would be lower. This would not affect the probability of a rupture but it would reduce the amount of gas released in the event of a rupture, thereby reducing the risk of exposure from each pipeline.

The risk of exposure to a significant or lethal dose of H_2S were modeled for one pipeline at a throughput of 960 MSCFD (Exxon, 1984) and two pipelines at a throughput of 1320 MSCFD (Exxon, 1985). The risk for two pipelines at a throughput of 1920 MSCFD was estimated by doubling the risk from one pipeline at a throughput of 960 MSCFD. It is provided as a worst case analysis. Exxon does not currently propose to process that quantity of sour gas. These risks are shown on Tables II-12 and II-13.

The risks of exposure of individual receptors to significant doses of H_2S are all expected to be less than the 3 in 100,000 annual risk determined to be acceptable. In addition, the annual individual risks are also expected to be less than the 1 in 100,000 determined to be acceptable for a lethal dose. Even for the worst-case risk shown for two pipelines operating at capacity (960 MSCFD each), the risk of exposure to a significant or oethal dose of H_2S is acceptable.

Exxon has implemented a pre-operational contingency plan (during construction) and will implement an operational contingency plan to protect the general public.

NO ACTION (Alternative 1)

The No Action alternative would limit approval of the facilities to those described in the Riley Ridge ROD which states that all gas processing facilities would be located at the Shute Creek (Phase I) site. It was not analyzed in detail because a detailed analysis of air quality, using site-specific meteorological data from the Shute Creek (Lincoln County) plant site, indicated that up to 600 MSCFD of sour gas could be processed without a violation of the Prevention of Significant Deterioration (PSD) increments. However, if another module were located at the same site, the PSD increments would be exceeded at the point of highest concentration (Opal Bench).

Table II-8

Population Baseline
Lincoln County, Selected County Sub-areas and Selected Towns
1985 to 1992

Jurisdiction	1985	1986	1987	1988	1989	1990	1991	1992
Lincoln County	16,815	17,253	17,557	18,096	18,392	18,948	19,220	19,532
Star Valley CCD	8,373	8,522	8,721	8,898	9,044	9,221	9,441	9,757
K/D/O Area	6,768	6,979	7,121	7,275	7,385	7,615	7,749	7,803
LaBarge Area	461	496	498	491	478	473	785	481
Kemmerer Town	4,714	4,872	4,978	5,094	5,176	5,348	5,449	5,489
Diamondville Town	1,427	1,469	1,497	1,528	1,550	1,596	1,623	1,633
LaBarge Town	412	445	447	441	428	423	434	431
Opal Town	201	205	208	211	213	218	221	222

Sources: Mountain West Research - Southwest, December 1984; Denver Research Group, December 1984

EXXON LABARGE PROJECT PHASE II
WYOMING INDUSTRIAL SITING APPLICATION

Table II-9 Projected Baseline Population by Age and Sex
Sweetwater County

Year		0-14 Years	15-64 Years	65+	Total
1985	Total	13,507	29,060	2,653	45,220
	Male	6,867	16,454	1,221	
1986	Total	13,662	29,442	2,782	45,886
	Male	6,947	16,288	1,278	
1987	Total	13,853	29,742	2,905	46,500
	Male	7,046	16,172	1,333	
1988	Total	13,850	30,080	3,022	46,952
	Male	7,047	16,313	1,385	
1989	Total	13,774	30,275	3,136	47,192
	Male	7,014	16,290	1,436	
1990	Total	13,680	30,556	3,244	47,480
	Male	6,968	16,347	1,484	
1991	Total	13,483	31,027	3,378	47,888
	Male	6,871	16,572	1,545	
1992	Total	13,281	31,495	3,503	48,279
	Male	6,770	16,795	1,601	

Source: Mountain West Research - Southwest, November 1984

EXXON LABARGE PROJECT PHASE II
WYOMING INDUSTRIAL SITING APPLICATION

Table II-10

Population by Age and Sex Characteristics
Projected Baseline
Sublette County

Year		0-14 Years	15-64 Years	65+	Total
1985	Total	1,336	3,775	442	5,553
	Male	701	2,187	221	
1986	Total	1,313	3,836	459	5,608
	Male	687	2,227	228	
1987	Total	1,292	3,861	478	5,631
	Male	677	2,239	229	
1988	Total	1,272	3,846	503	5,621
	Male	656	2,226	245	
1989	Total	1,259	3,849	513	5,621
	Male	654	2,222	249	
1990	Total	1,257	3,853	521	5,631
	Male	658	2,214	254	
1991	Total	1,237	3,878	532	5,647
	Male	645	2,228	257	
1992	Total	1,220	3,851	537	5,608
	Male	631	2,211	260	

Source: Mountain West Research - Southwest, November 1984

TABLE II-11
PROJECTED REVENUES FOR LINCOLN AND SWEETWATER COUNTIES

Property Tax	Lincoln County	Sweetwater County
Investments	$635,400,000	$752,500,000
Assessment Rate	0.08	0.08
Taxable Value	50,832,000	60,200,000
Mill Levy		
County	45.43	10.73
School	25.00	37.84
Revenue		
County	2,309,298	645,946
School	1,270,800	2,277,968

Table II-12

Annual Risk of Exposure
To A Significant Dose of H_2S
For The Most Probable Rupture Case

Receptor[1]	Closest Distance To Trunkline (Miles)	Direction From Trunkline	1 Pipeline[2] (960 MSCFD)	2 Pipelines[3] (1320 MSCFD)	2 Pipelines[4] (1920 MSCFD)
Western Camp	0.48	Southwest	0.2	0.35	0.4
Calpet	0.62	Southwest	0.2	0.31	0.4
Rainbow Camp	0.97	West	0.05	0.1	0.1
LaBarge Creek Ranch	0.86	East	0.6	1.0	0.2
Fontenelle Creek Ranch	0.92	Southwest	0.07	0.09	0.14

1/ Sensitive receptors within one mile of the trunkline.

2/ Exxon LaBarge Project - Phase I.

3/ Exxon LaBarge Project - Phase I plus Phase II - proposed.

4/ Two pipelines at design capacity - not currently proposed - worst case analysis. Estimated by doubling the risk from a single pipeline.

Table II-13

Annual Risk of Exposure
To A Lethal Dose of H_2S
For The Most Probable Rupture Case

Receptor[1/]	Closest Distance To Trunkline (Miles)	Direction From Trunkline	1 Pipeline[2/] (960 MSCFD)	2 Pipelines[3/] (1320 MSCFD)	2 Pipelines[4/] (1920 MSCFD)
Western Camp	0.48	Southwest	0.05	0.12	0.1
Calpet	0.62	Southwest	0.03	0.06	0.06
Rainbow Camp	0.97	West	0.001	0.006	0.002
LaBarge Creek Ranch	0.86	East	0.1	0.25	0.2
Fontenelle Creek Ranch	0.92	Southwest	0.004	0.007	0.008

1/ Sensitive receptors within one mile of the trunkline.

2/ Exxon LaBarge Project - Phase I.

3/ Exxon LaBarge Project - Phase I plus Phase II - proposed.

4/ Two trunklines at design capacity - not currently proposed - worst case analysis. Estimated by doubling the risk from a single trunkline.

NO ADDITIONAL RIGHTS-OF-WAY AUTHORIZED (Alternative 2)

Under this alternative, the additional requests for federal rights-of-way would be denied. This would preclude Exxons full development of their project. Exxon would not be able to fully serve their committed markets. In addition, other potential markets seeking CO_2 to enhance the recovery of oil from old fields would be forced to seek CO_2 elsewhere.

Exxon would also not be able to provide as much natural gas to the existing pipeline transportation system. This, in part, would result in inefficient development of their field. The project's purpose, to process 1,320 MSCFD of sour gas and produce 320 MSCFD of natural gas for consumers, would be curtailed, thus contributing 55% less domestic natural gas than the Proposed Action.

Communities in Lincoln, Sublette, and Sweetwater counties would receive lower revenues than if the proposed action were approved. This impact would be highest in Sweetwater County. Some of the communities have been anticipating that construction and operating personnel would be as described under the proposed action. If this alternative were implemented, the numbers of construction and operating personnel, as well as associated population numbers, would be lower.

This alternative would not meet the overall purpose of and need for the proposed action as described in the Riley Ridge Natural Gas Project EIS. The Riley Ridge ROD essentially approved the objective of the proposal. Because of these two points, this alternative will not be analyzed in detail unless all the other alternatives would result in potentially significant impacts.

The helium recovery unit would not be authorized. Potential markets for the purified helium would have to find sources elsewhere.

REDUCED CAPACITY (Alternative 3)

This alternative would allow Exxon to supply most, if not all, of their current markets for CO_2, and natural gas or approximately 72% of their proposed CO_2 and natural gas production levels. Exxon's ability to develop additional markets would be more limited than under the Proposed Action because their gas processing capacity would be lower.

Exxon's capacity, in the Riley Ridge EIS, was originally estimated at 1,200 MSCFD (200 MSCFD per unit, for six units). Current estimates are that each unit can process up to 240 MSCFD. Most of the impacts associated with the relocation of two gas processing facilities would be similar to the Proposed Action, with the following exceptions. Air quality impacts would be reduced because the total capacity authorized would be 960 MSCFD instead of 1,320 MSCFD, a reduction of 27 percent. However, information to date indicates that air quality impacts from the proposed facilities would be acceptable. Therefore, this alternative has little advantage in terms of air quality. The revenues to Sweetwater, Lincoln, and Sublette counties under this alternative would be reduced from that given in Table I-1 for the Exxon Phase I and II investment.

The magnitude of impacts from construction related population is not expected to change, however, the duration of impacts is expected to be shortened because the third unit at each of the Shute Creek (Lincoln County) and the Phase II (Sweetwater County) sites would not be built.

If Exxon were to propose additional gas processing facilities in the future, the proposal would be analyzed in conformance with the requirements of the National Environmental Policy Act and would be related to the cumulative impacts projected in the Riley Ridge EIS.

Under this alternative, a second feed gas trunkline would not be necessary. Concern was expressed by the public over the first trunkline about safety and property values, even after the Health and Safety Individual Risk Assessment for Exxon's LaBarge Project Sour Gas Trunkline indicated that the risks to public health and safety were considered to be acceptable. A second public meeting was held in LaBarge, Wyoming on May 22, 1985. The degree of concern present at the public meeting on the first trunkline did not materialize. There was some concern by a few individuals, however, no new information was brought to BLM's attention. Since the concern expressed was lower than expected, the potential advantage of this alternative would be diminished.

Members of the public who were concerned included both individuals whose land would be crossed by the trunkline and individuals living in the general vicinity of the trunkline route. Individuals whose land will be crossed by the first feed gas trunkline have already signed agreements with Exxon providing for multiple pipelines. This is not expected to reduce the concern by other members of the public in the vicinity of the trunkline route.

UNAVOIDABLE ADVERSE IMPACTS

Implementation of the BLM and FS committed and required federal mitigation measures would reduce impacts associated with the project. Those impacts that would remain following mitigation would be similar to that described in the Riley Ridge Natural Gas Project Draft EIS, pages 4-138 thru 4-140.

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

Significant impacts and consequences would not differ from those described in the Riley Ridge Draft EIS (pages 4-141 and 142).

SHORT-TERM USE AND LONG-TERM PRODUCTIVITY

Long-term environmental consequences would not differ from those described in the Riley Ridge Draft EIS (page 4-140).

CUMULATIVE IMPACTS

The cumulative impacts of the proposed action (Phase II) and other actions associated with the LaBarge Project (see EAs prepared by BLM and FS listed under References) are within the scope of the impacts addressed in the Riley Ridge final EIS. Table I-1 shows some of the more important comparisons.

No additional significance thresholds would be exceeded by the proposed action.

CHAPTER III

CHAPTER III

MITIGATION AND MONITORING

MITIGATION

All the "Required Federal Measures and Applicants' Standard Operating Procedures Designed to Reduce Environmental Impacts" listed in the Riley Ridge Natural Gas Project Record of Decision (attachment B) will continue to be required. Additional mitigation measures developed through supplemental environmental documents would also be required for implementation of the action.

MONITORING

Monitoring will be conducted as specified in the Riley Ridge Natural Gas Project Record of Decision. This will include not only standard compliance monitoring during construction and follow-up restoration but also implementation of the following Monitoring Plans:

1. Air Quality Related Values (AQRV)

2. Fisheries and Surface Monitoring (including monitoring stations above and below the point of discharge into Black Canyon Creek)

3. Groundwater Monitoring

CHAPTER IV

CHAPTER IV

CONSULTATION AND COORDINATION

This document was prepared by the Rock Springs District after consultation with Exxon Company, USA, the Pinedale Resource Area (BLM), the Kemmerer Resource Area (BLM), the Big Piney Ranger District, and the Forest Supervisor's Office of the Bridger-Teton National Forest.

Scoping was accomplished through the consultation noted above, and by utilizing the scoping comments received on the Riley Ridge EIS, follow-up action and contacts, public meetings held by BLM, public hearings conducted by the Wyoming Industrial Site Administration (ISA) and the Wyoming Department of Environmental Quality (DEQ), the distribution of Riley Ridge Project supplemental environmental documents and periodic preliminary scoping statements on well field development. Exxon has applied to ISA for a siting permit and to DEQ for a PSD (air quality) permit. These applications were also a source of information used in the preparation of this environmental assessment.

The EA was distributed to approximately 400 agencies and member of the general public on May 7, 1985. Comments were requested until June 8, 1985.

A public meeting was held on May 22, 1985, in the LaBarge School, LaBarge, Wyoming. A transcript of this public meeting is available for review at the BLM Rock Springs District Office. The meeting was attended by about 24 members of the general public. The BLM introduced the meeting and briefly described the contents of the EA for Phase II and the purpose for the meeting and the comment process. Exxon representatives, including those currently living in the area were introduced.

Exxon described the Phase II proposal and discussed their preoperational contingency plan and draft operational contingency plan. A public comment period followed.

Six individuals raised questions and concerns on various aspects of the proposal. One individual was very concerned over the safety aspects of operation of the sour gas trunkline.

During the comment period on this EA comments were received from the U.S. Fish and Wildlife Service and from the following entities of state government:

Office of Industrial Siting Administration
Game and Fish Department
Wyoming Disaster and Civil Defense Division
Wyoming Recreation Commission
Oil and Gas Conservation Commission
Wyoming State Archives, Museums and Historical Department
State Engineer's Office

These comments were analyzed and were considered in the revisions that have been made to this revised EA. No comments from the general public were received.

REFERENCES

Dames and Moore, March 1984. Revision to Exxon LaBarge Project Phase II PSD Permit Application.

Exxon Company, U.S.A. and Environmental Research and Technology Inc., May 1985. Health and Safety Individual Risk Assessment for Exxon's LaBarge Project - Phase II Feed Gas Pipeline.

Exxon Company, U.S.A. and Environmental Research and Technology, Inc., September 1984. Health and Safety Individual Risk Assessment for Exxon's LaBarge Project, Sour Gas Trunkline.

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Exxon Company, U.S.A., February 1985. LaBarge Project, Permit Application for Phase II, Supporting Data for Application for Amendment to Permit ISC 83-4.

Exxon Company, U.S.A., April 1985. Project Description and Right-of-Way Application, Phase II Feed Gas Pipeline.

U.S. Department of the Interior, Bureau of Land Management, May 1983. Riley Ridge Natural Gas Project, Draft Environmental Impact Statement

U.S. Department of the Interior, Bureau of Land Management, November 1983. Riley Ridge Natural Gas Project, Final Environmental Impact Statement.

U.S. Department of the Interior, Bureau of Land Management, January 1984. Riley Ridge Natural Gas Project, Record of Decision.

U.S. Department of the Interior, Bureau of Land Management, January 1984. Sour Gas Pipeline Alternatives, Supplemental Environmental Assessment, Riley Ridge Natural Gas Project.

U.S. Department of the Interior, Bureau of Land Management, July 1984. LaBarge Expanded Plant Site (Compressor Station, Sweetwater County), Supplemental Environmental Assessment, Riley Ridge Natural Gas Project (EA No. WY-042-EA84-82).

U.S. Department of the Interior, Bureau of Land Management, October 1984. Feed Gas Trunkline Record of Decision and Supplemental Environmental Assessment, Riley Ridge Natural Gas Project, (EA No. WY-041-EA4-97).

U.S. Department of the Interior, Bureau of Land Management, March 1985. Supplemental Environmental Assessments, Exxon LaBarge Project, Well Field Changes, (EA No. WY-049-EA85-32).

U.S. Department of the Interior, Bureau of Land Management, 1985. Powerline Right-of-Way Supplemental Environmental Assessment, Riley Ridge Natural Gas Project (EA No. WY-041-EA85-66)

APPENDIX

APPENDIX 1

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
District Office
P.O. Box 1869
Rock Springs, Wyoming 82902-1869

IN REPLY REFER TO:
3109 (411)

31 JAN 1984

Paul W. Henderson
Exxon Company, U.S.A.
P.O. Box 1600
Midland, Texas 79702

Re: Approval to Vent CO_2 Gas
LaBarge Project
Lake Ridge Unit
Fogarty Creek Unit
Graphite Unit
Sublette County, Wyoming

Dear Mr. Henderson:

This office has reviewed your application dated August 23, 1983, to vent carbon dioxide (CO_2) gas from the above-referenced federal units, which are collectively referred to as the "LaBarge Project". Such gas would be vented after processing at the proposed gas plant site known as the "Shute Creek" site in Lincoln County, Wyoming.

Pursuant to CFR 43, part 3162.1; Notice to Lessees (NTL) 4-A; and the Riley Ridge Draft Environmental Impact Statement (DEIS), Final Environmental Impact Statement (FEIS), and Record of Decision (ROD) signed on January 25, 1984, we are hereby approving your application to vent CO_2 gas from the Lake Ridge, Fogarty Creek, and Graphite units with the following conditions:

1. Exxon shall continue to diligently seek a purchaser for the CO_2 gas.

2. Exxon shall report, in writing to the Bureau of Land Management, Rock Springs district office on an annual basis, beginning October 1, 1984 of its efforts and progress in securing a purchaser for the CO_2 gas.

3. If the Bureau of Land Management (BLM) and Minerals Management Service (MMS) jointly determine that a viable economic market for the CO_2 gas is available and not being utilized or pursued by Exxon, compensatory royalty may be assessed for the marketable volume of CO_2 gas.

4. The emissions of hydrogen sulfide (H_2S) and reduced sulfur compounds (COS) entrained in the CO_2 gas to be vented shall not exceed the ceiling of emissions as permitted by the State of Wyoming - Department of Environmental Quality. Further, ambient H_2S concentrations shall not violate the State of Wyoming - Department of Environmental Quality's ambient standard for H_2S.

Please direct any questions concerning this action to Robert Chase at (307) 382-5350.

Sincerely yours,

Mary O. Brown

Assistant District Manager
Mineral Resources

Attachment

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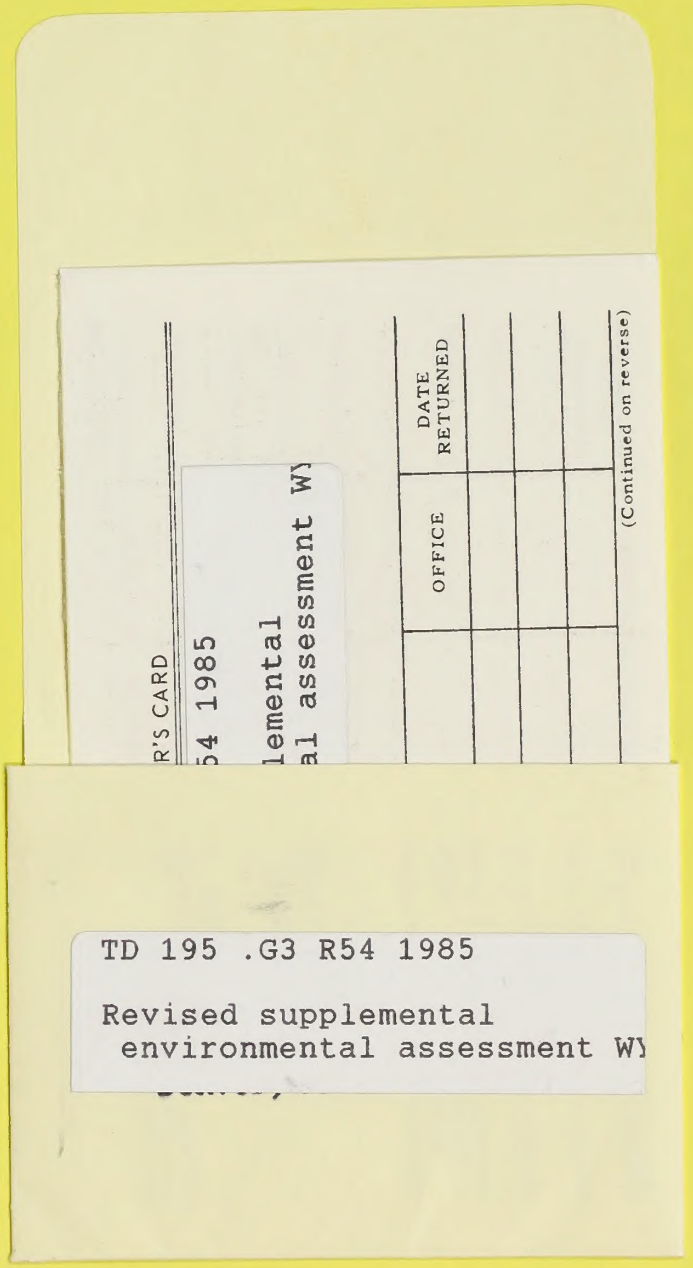

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